



## RETURN

To an Address of the HOUSE OF COMMONS, dated 24th February, 1870; for Reports of Superintendents of Roads, from Thunder Bay to Fort Garry on the Red River; and detailed statement shewing the length of road constructed East of the Lake of the Woods and West of said Lake; the length of bridging constructed; the cubic contents of embankments made, and excavations in earth and rock respectively, with the cost in items; the number of men, foremen, superintendents, clerks, and all others employed on each section; also, Copies of Orders in Council relating to the said works, and instructions sent to those in charge.

By Command.

ET. PARENT,

*Under Secretary of State.*

DEPARTMENT OF SECRETARY OF STATE,  
Ottawa, 29th March, 1870.

Return to an Address of the House of Commons, dated 23rd April, 1869; for a Return shewing what progress has been made in opening up communication between Fort William and the Red River Settlement; also, what amount has been expended upon said work, together with names of parties to whom amounts have been paid in connection with such work, and for what service.

By Command.

HECTOR L. LANGEVIN,

*Secretary of State.*

Department of Secretary of State,  
Ottawa, 19th May, 1869.

(Copy of No. 5,334.)

FORT GARRY, RED RIVER SETTLEMENT,  
9th November 1868.

To the Hon. WILLIAM McDougall, C.B.,  
The Commissioner of Public Works.

SIR—I have this day drawn upon you at sight through the Bank of Montreal in Ottawa, in favor of A. G. B. Bannatyne, Esq., for £263 6s. 3d. sterling, and another draft at sight in favor of John Schultz, Esq., M.D., for £120 sterling. The former draft covers the expense of cartage of a large portion of my provision and implements from Georgetown to this place, and purchases of additional supplies, and the latter covers purchases of supplies amounting to £70 17s. 7d. sterling, together with a sum of £49 2s. 5d. sterling, received by me in cash at the hands of Dr. Schultz for present use.

I have to say that I think it advisable that a credit should be lodged with the Governor of the Hudson's Bay Company here for the sum, say, of one thousand pounds sterling, to be drawn upon as required in the prosecution of the duties assigned to me.

The distance from this settlement to the nearest American town, where drafts can be negotiated, is so great as to render it absolutely necessary that some arrangements of this kind should be made at once in order to facilitate operations. The ordinary charge the Hudson's Bay Company make here on drafts through them is five per cent., but I have reasons to believe that this charge has hitherto been made for reasons which will not apply in our case, and that there will be little difficulty in negotiating through them drafts at par for any amount required.

A considerable portion of our purchases here has been made in consequence of our inability to get down the balance of our stuff (including our groceries) on account of the lateness of the season. By paying extremely exorbitant rates to freighters, who are naturally unwilling to undertake a journey of four hundred miles with ox carts at this season of the year, we might have succeeded in getting these supplies; but ascertaining that in January we can hire the same carters to bring in the supplies on sleds at a slight advance on summer rates, we deemed it advisable to purchase here what we required in the meantime until the balance of our own supplies could be hauled in in winter time from Georgetown.

As it is, the expense of freight to this place has been heavy. Under ordinary circumstances, freighting so long a distance at the rate of twenty miles a day is very expensive; but the calamity which has happened to this settlement has rendered necessary the employment of so many carts in bringing in supplies for the settlers' use that it was a most difficult matter to procure the number we required. I have to say that, having completed all our arrangements here, Mr. Mair and I leave Fort Garry this morning for our Head Quarters at Oak Point, some thirty miles from this place, and that active operations will be begun at once. From the observations made by me last week on the line from Oak Point eastwards, I feel satisfied that, should no greater difficulties intervene between the points reached by me and the Lake of the Woods than that already known, this section of the Road, under ordinary circumstances, could be constructed at a cost decidedly within the estimate.

I may add that I anticipate some difficulty at first in prosecuting a work of this kind with unaccustomed laborers, but that the people here are greatly interested in its success and anxious for its completion.

I am, Sir,

Most respectfully,

(Signed,)

JOHN A. SNOW,

*Superintendent.*

(Copy of No. 3,724.)

DEPARTMENT OF PUBLIC WORKS,

Ottawa, 11th December, 1868.

SIR,—In compliance with the request of Mr. John A. Snow, Superintendent of the Red River and Fort William Road, that the sum of £1,000 sterling, should be placed to his credit at Fort Garry, to be drawn as required, I am instructed to inform you that Mr. Snow's drafts upon this Department for that amount, through the Bank of Montreal, will be duly honored.

I have the honor to be, &c.,

(Signed,)

F. BRAUN,

*Secretary.*

The Governor of Hudson's Bay Co.,  
Fort Garry.

(Copy of No. 3,725.)

DEPARTMENT OF PUBLIC WORKS,  
Ottawa, 11th December, 1868.

SIR,—In beg to inform you that in compliance with the suggestions contained in your report of the 9th ultimo, the Governor of the Hudson's Bay Company at Fort Garry, has been this day advised that your drafts upon this Department for £1,000 sterling, through the Bank of Montreal, will be duly honored.

I have the honor to be, &c.,  
(Signed,)

F. BRAUN,  
*Secretary.*

J. A. SNOW, Esq.,  
Superintendent, Red River Road,  
Fort Garry.

(Copy of No. 5,556.)

RED RIVER ROAD DEPOT,  
Mistamiscano, December 1st, 1868,  
At Junction of Woods and Prairie, about  
30 miles east of Fort Garry.

SIR,—I have the honor to inform you that since the date of my last report, I have explored the country lying between this place and White Mouth River in the direction indicated by Mr. Dawson, a distance of about 30 miles, and I have now the survey and final location of the line, completed to Broken Head River, a distance of fifteen (15) miles.

I have found it necessary to deviate largely from the trail made under the direction of Mr. Dawson, obtaining thereby a much more direct line, and avoiding a considerable portion of the swampy lands crossed by the trail.

So far as my exploration extends, I do not find the country so swampy as is represented by Mr. Dawson's map, but consisting of a succession of low, sandy, and gravelly ridges, running (fortunately) in an easterly direction, with open beaver meadows, or muskeys (as they are here styled) between them. The margins of these meadows are very irregular, resembling the general configuration of lakes, shewing, in many instances, narrow connections from one to another (suitable places for the road to pass). Of course the dry land has similar indentations, requiring a great deal of surveying to be done, before the road line can be satisfactorily determined.

The ridges have generally only a few feet of elevation above these open meadows, and are in most places covered with a recent growth of aspen and oak, varying from six to thirty feet in height. In some instances, fires have killed this timber, and the ground is thickly strewn with fallen trees, crossed in every direction. The soil is sandy and gravelly and will make an excellent and durable road, when properly grubbed and graded.

I have now twenty-three (23) men on the works, and the number will no doubt go on increasing.

With this number the survey has been accomplished as above described. A comfortable shanty twenty-four (24) feet square has been erected, and four (4) miles of line, completely cleared of timber to the width of sixty (60) feet. The work on the road commenced on the 9th of November, and the pay list amounts to thirty-seven pounds, four shillings and eleven pence sterling (£37 4s. 11d. stg.) irrespective of board.

The only work that can be done during the winter, will be the clearing of the track. Fascineing such swamps as are met with (to be in readiness for covering with earth in the spring) and bridging the streams.

The season so far has been extremely favorable for this kind of work, as yet we have only two (2) inches of snow. During the month of November, every day has been fine, with the thermometer varying between 20° and 35° above zero.

Taking into account the apparent scarcity of provisions, the application for labor has not been as great as I anticipated, and in general those engaged would prefer to be paid partly in cash or clothing, rather than entirely in provisions at cost price here. Before the first of May, however, I anticipate the real scarcity of food will be more sensibly felt.

From recent conversation here with persons well acquainted with the shore of the Lake of the Woods, I am inclined to believe that Mr. Dawson's shewing of the north-west angle of that lake, does not agree with the monuments in the field. And in order that the terminus of this road may be on British Territory, I have to request you to forward me, with the least possible delay, a copy of Mr. Thompson's plan of this portion of the boundary survey.

I am desirous of pushing my explorations through, without delay, to the Lake of the Woods, anticipating considerable difficulty in getting a practicable route in the vicinity of that lake, and as this point will no doubt become a place of great importance, it is necessary that the terminus should be so located that it may be at as great a distance as possible from American Territory.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed,)

JOHN A. SNOW,

Superintendent, Fort Garry Section,  
Red River Road.

To the Hon. W. McDougall, C. B.,  
Commissioner of Public Works,  
Ottawa City, Ont.

(Copy of No. 3,818.)

DEPARTMENT OF PUBLIC WORKS,

Ottawa, 29th December, 1868.

SIR,—As requested by your letter of the 1st, received on the 28th inst, I enclose herewith copy of Mr. Thompson's plan of a portion of the boundary survey between Canada and the United States.

I have the honor to be, &c.,

(Signed,)

F. BRAUN,

Secretary.

JOHN A. SNOW, Esq.,  
Supt. Red River Road,  
Fort Garry.

(Copy of No. 5,734.)

RED RIVER SETTLEMENT,

4th January, 1869.

To the Hon. Wm. McDougall, C. B.,  
Minister of Public Works,  
Canada.

SIR,—I have the honor to report further progress made upon the works here under my charge during the month of December. The number of men employed has been forty-one including foremen, and five miles of the road have been opened. On this distance nearly one mile of fascineing has been required, and is now fully completed and ready for gravelling in the spring. The whole distance opened to date is nine miles.

The line is completely surveyed to Broken Head River and explored to White Mouth River. On all that distance of about thirty miles the country is extremely favorable for good road making. The half-breed and French laborers are good, active axe-men and obedient.

Indians in the neighbourhood are apparently friendly and have so far asked for nothing excepting a few presents at Christmas and New Year.

Up to the 20th December, very little snow had fallen, but since then several violent snow storms have occurred, and the depth of the snow is now about two feet and will make the work of clearing and underbrushing the line much more tedious and consequently more expensive.

As soon as the survey is completed to White Mouth River, I intend going quite through to the Lake of the Woods, and shall then thoroughly explore that portion of the line.

Applications for work have been very numerous of late, and plainly indicate the increasing scarcity of food in the settlement. I shall continue to employ as many men as the nature of the work and the season of the year will admit.

I have the the honor to be, Sir,

Your obedient Servant,

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec.,

R. R. Road.

(Copy of No. 3,956.)

DEPARTMENT OF PUBLIC WORKS,

Ottawa, 4th February, 1869.

SIR,—I beg to furnish you, for your information and guidance, with the following statement of the Fort Garry Road account, viz:—

Paid Mr. Snow's drafts to date.....	\$7,611 87
“ Mr. McDougall's “ .....	5,110 10
“ Mr. Mair .....	200 00
	<hr/>
Balance in hand, Bank of Montreal .....	\$12,921 97
	<hr/>
Amount of Order in Council.....	2,078 08
	<hr/>
	\$15,000 00

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

F. BRAUN,

Secretary.

John A. Snow, Esq.,

Supt. Fort Garry Road, Fort Garry.

(Copy—No. 6,257)

HEAD QUARTERS, R. R. & L. S. ROAD,

Oak Point, 8th March, 1869.

SIR,—I have the honor to acknowledge the receipt of your letter of the 4th ultimo, advising me of the amount drawn on account of the works here at that date, and also of the amount of the appropriation made for the service under my charge. These matters shall receive due attention.

My last report of progress informed you of the amount of work done up the end of the month of December, between which, and the last of February, eleven additional miles have been completed, in which three-quarters of a mile has been fascined. The material for a bridge over the Broken Head River has been prepared, as well as a fourth and fifth shanty, built for the accommodation of the men, who have just been removed to the latter shanty.

The whole distance opened is twenty miles.

I shall be able to continue the work without interruption until the end of this month, or till the spring floods commence.

The attendance of the men has been very irregular, they being obliged to take provisions to their families at least once a month, and to provide them with firewood and other necessaries.

I have surveyed a line for the road from the Red River at the mouth of the River La Seine, uniting with my survey at the entrance to the woods. This line I have located on the best and shortest route, and find the distance to be twenty-eight miles, of which three and a quarter miles will have to be fascined; the balance, or twenty-four and three-fourth miles, is on fine dry land, admirably adapted for settlement.

The terminus which I have selected at Red River, appears to me to be the most favorable locality for bridging that stream, and will avoid an expensive bridge over the River La Seine, which here runs in a deep and wide ravine.

I have also surveyed and located the line from Broken Head River to White Mouth River, a distance of fifteen miles and seventy chains. The entire length of line located to date is fifty-eight and three-fourth miles.

The White-Mouth River is two hundred and forty-eight feet wide, between the top of its banks at the site which I have selected for the bridge, and the banks are about sixteen feet high above low water. A rapid occurs here, and the bed of the stream is composed of fixed rocks strewn with boulders, which will be required for pier filling. At present there is very little water in the stream passing the rapid, but at the spring flood it has a depth of from six to eight feet.

I shall endeavor to prepare the timber for a bridge here during the month of April, before the frost has left the swamps, in which only suitable timber can be found.

I have explored a considerable portion of the route between White Mouth and Birch Rivers, and started to go through to the Lake of the Woods, but my principal man or guide falling ill, and the snow being very deep, and too light to afford good snow-shoeing, I was unable to proceed.

This part of the line can be explored to more advantage during the ensuing autumn than at any other period.

There has recently been a considerable falling off in the number of men, and very few new applications for labour, and I am of opinion that able-bodied men will be scarce in the spring.

The nature of the work being entirely foreign to their tastes, especially the use of the pick and shovel which has never been used her, and, in order to prosecute the work of grading the road, men must be obtained elsewhere.

I would also suggest, that the men be paid entirely in cash, as soon as the Red River navigation is open, as the country will then be well supplied by the merchants here, with provisions at as cheap a rate as we can afford to sell them, unless sold under cost, and already those employed would prefer cash instead of provisions at cost, as payment.

I have the honor to be, &c.,  
(Signed,) JOHN A. SNOW,

Supt. Fort Garry Section,  
Red River Road.

The Honorable WILLIAM McDougall, C.B.,  
Minister of Public Works,  
Canada.

(Copy of No. 6,719)

HULL, May 4th, 1869.

Hon. WILLIAM McDougall, C.B.,  
Minister of Public Works, &c., &c.,  
Ottawa.

SIR,—In my report of progress of the 8th of March last, I detailed to you what had been accomplished upon the works under my charge up to the end of the month of

February. I have now the honor to inform you that since then eight miles additional have been opened, in which one-half mile has been fascined, and a shanty built at White-Mouth River. The total number of miles opened to date is twenty-eight, of which two and one-fourth have been fascined. The works, as far as possible, were suspended on the first of April.

As stated in my report above referred to, the line selected by me for the road across the Prairie section, commences a little below the mouth of River La Seine, opposite a bend in the Red River known as Point Douglass. The river is here five hundred feet wide at low water, and seven hundred between the top of its banks, which are of the uniform height of twenty feet above low water. This is the most favorable site for a bridge over the Red River, below the mouth of the Assiniboine, and only a short distance below the town of Winnipeg. By leaving the Red River at this point, an expensive bridge is avoided over the River La Seine, and the approach to the river is on better ground, and in a more direct line, than could be obtained elsewhere.

Going eastward from Red River for eight miles the line follows a chain of coteau like islands in the surrounding low and swampy prairies, which is annually flooded in spring by back water from the River Seine, and one of its tributaries upon which a dam has been erected for mill purposes.

On these eight miles, three and a quarter miles have to be fascined, and then deeply covered with the best material that can be obtained. On the coteau or islands, the road will require to be well graded, and several off-take drains will be required to discharge the surface water into the Seine.

From the 8th to the 22nd mile post, the line is on fine dry prairie, in a very direct line, having the River Seine generally but a short distance on the right. At the 22nd mile post, a low prairie occurs, one mile and thirty chains in width. The soil is here hard and fine, and although covered with water in spring, can be crossed without danger. It is produced by back water from a large muskey or marsh in which the Seine is lost for a distance of nearly two miles. The marsh is entirely overgrown with rank grass and reedy, with here and there willow bushes and small tamarack trees. The marsh acts as a dam in spring, producing extensive tracts of wet prairie in the vicinity.

In order to make a permanent road across the wet prairie here, a large drain must be made on the side next the marsh completely across the low land, uniting with the Seine a little below where it issues from the marsh. A smaller drain will also be required on the opposite side of the roadway, with a culvert to convey the water which may accumulate in it across the road into the main drain. The remaining portion of the prairie section, five and three-fourth miles traverses a dry level prairie.

The soil is here exceedingly rich and fertile, being a mixture of clay and sandy loam, more easily tilled, and is said to produce better grain than the more tenacious clay soil of the banks of Red River; situated on this tract, on either side of the River La Seine is the settlement of Oak Point, numbering about forty families; they are nearly all either French Canadians or half-breeds.

The wooded section surveyed consists of a succession of sandy and gravelly ridges and areas, extending in longest diameter east and west and separated by open meadows or tamarack and spruce swamps. On the dry land the timber is oak and poplar, as far eastward as Broken Head River, thence to near White Mouth River it is chiefly cypress. The soil where the oak and poplar grows is tolerably good, but here, being so much inferior to the soil of the prairie will for years to come be entirely neglected. Very large tracts of this wooded section have been run over by fire, which in some places kill all the trees, and the ground is now covered over with their fallen bodies, crossed in every direction, among which a vigorous growth of young trees has sprung up. Grass grows everywhere except in the very thickest swamps, and I observed a great many horses grazing here all winter in excellent condition.

When grubbed and graded the road in this wooded section will be equal to the best gravel road in Canada, and much superior to the road on the yielding soil of the prairie section.



The works were in progress from the 9th of November to the 1st of April, during which period an average of forty men were employed, besides a large number of teams in forwarding supplies and in hauling material for fascineing the swamps. To the laborers an average of eighteen dollars per month has been paid (exclusive of board) chiefly in provisions at cost price, the balance in cash to enable them to purchase such articles of clothing as they required.

On account of the works the sum of sixteen thousand two hundred and twenty-six dollars and forty six cents (\$16,226.46) has been advanced. The stock on hand consists of a complete outfit of such tools as are required in road making; with camp equipage, &c., amounting in value to one thousand three hundred and twenty dollars (\$1,320.00).

The stock of provisions consists of two hundred barrels of flour and twenty-five barrels of mess pork at Fort Abercrombie, and fifty-one barrels of flour and sixteen barrels of mess pork at Georgetown, the value of which may be stated at three thousand seven hundred and ninety-one dollars (\$3,791), shewing the total value of stock to be five thousand one hundred and eleven dollars (\$5,111), reducing the actual expenditure to (\$11,115.46) eleven thousand one hundred and fifteen dollars and forty-six cents.

On my way returning to Canada (with the concurrence of Joseph McDougall Esq., your agent at St. Paul,) I contracted with Dr. J. C. Schultz to forward in flat boats, *via* Red River, the provisions then lying at Abercrombie and Georgetown to Fort Garry, at 5s. sterling per hundred pounds, the Doctor assuming all risk attendant upon the navigation. These supplies are to arrive at Fort Garry on or before the first day of June next.

During the autumn and winter the current rate for freight was 10s. sterling from Georgetown, and 14s. from Abercrombie to Fort Garry.

The cost of the works done has been very much increased by the season of the year to which my operations have so far been confined, and the extraordinary outlay occasioned by having to transport the necessary supplies so great a distance so late in the season.

The main object of the expedition has been attained, that of furnishing to the industrious labourers, during a period of great scarcity, the opportunity of obtaining food for themselves and families during the winter months.

As some fears were entertained at the commencement that the numerous Indians in the vicinity of the Lake of the Woods might be troublesome, I am glad to be able to state, that although visited by a great many of these people and several of their chiefs, they were all peaceably inclined. To their long and sometimes very interesting speeches we were obliged to listen and reply, after which, upon receiving a present of food and tobacco, they always left with expressions of friendship.

Upon the arrival of the provisions now under way to Fort Garry, the work may be resumed, and as large quantities of supplies are being brought in by the merchants of Red River, any additional quantity can be obtained there, and I would suggest that all future payments to the men employed be made in cash.

I shall hold myself in readiness to return to the Red River settlement upon the shortest notice.

I have the honor to remain,

Your obedient servant,

(Signed)

JOHN A. SNOW,

Supt. Fort Garry Section,

Red River Road.

Return shewing the amount expended in opening up communication between Fort William and Red River Settlement, together with names of parties to whom amounts have been paid, and for what service, from 1st July, 1867, to 30th April, 1869:—

John A. Snow,	On account of disbursements .....	\$9,539.36
Jos. McDougall,	do do .....	6,487.10
S. J. Dawson,	do do .....	3,100.00
C. Mair,	do do .....	200.00

\$19,326.46

Department of Public Works of Canada.

(Copy of 6791.)

HULL, May 22nd, 1869.

Honorable WILLIAM McDUGALL, C.B.,  
Minister of Public Works, &c., Ottawa.

SIR,—I have the honor to inform you that I, yesterday, received a letter from my Assistant at Fort Garry, Red River Settlement, stating that the supplies being forwarded in flat boats from Fort Abercrombie and Georgetown, arrived safely there on the 4th inst. The flat boats made the descent from Abercrombie to Fort Garry in eleven days.

As mentioned in my report of the 4th instant of the present month, these supplies consist of two hundred and fifty-one barrels of flour, and forty one of mess pork, which, with the addition of some beef, which can be purchased in the settlement at a moderate price, would be food sufficient to carry on the works with a large force several months. In order that the work may be resumed before the season is far advanced, I would most respectfully suggest that a small sum, say four to five thousand dollars be placed at my disposal as early as possible; this sum would enable me to commence as soon as I could reach Fort Garry, and continue with a force of fifty or sixty men at least three months.

I have the honor to be, Sir,

Your very obedient Servant,

(Signed,)

JOHN A. SNOW,  
Superintendent, Fort Garry Section.

(Copy of 7985.)

HULL, 25th May, 1869.

Honorable WILLIAM McDUGALL, C.B.,  
Minister of Public Works, Ottawa.

SIR,—I have the honor to submit the following Estimate of the probable cost of completing the construction of the sixty miles of the Fort Garry Section of the Red River Road, surveyed and located by me during the past winter.

This estimate is based upon the supposition that work is to be resumed at once and completed before any change take place in the price of provisions at the settlement. It is also intended to include the cost of Superintendence.

Should the crops at Red River prove good this season, the balance of this Section may be built at Mr. Dawson's original estimate.

I have the honor to be,

Your very obedient Servant,

(Signed,)

JOHN A. SNOW,  
Superintendent Fort Garry Section,  
Red River Road.

## ESTIMATE.

PRAIRIE SECTION, 29½ MILES.		\$	cts.	\$	cts.
Fascineing, 4½ miles, at \$1,600 00 per mile .....		7,400	00		
Heavy Grading, 4½ miles in first section, at \$400 00 per mile .....		1,900	00		
Light do 19½ do at \$300 00 do .....		5,925	00		
Large drain, 1½ mile long, at \$2 00 per rod .....		660	00		
Off-take drain .....		750	00		
10 Culverts, at \$20 00 each .....		200	00		
				16,835	00
WOODED SECTION, 30½ MILES.					
Grubbing and Grading, 25½ miles, at \$500 00 per mile .....		12,875	00		
Gravelling, Fascineing, 2½ miles, at \$2 00 per rod .....		800	00		
Opening, Grubbing, and Grading, 2½ miles, at \$1,200 00 per mile .....		2,700	00		
Building Bridge at Broken Head River .....		75	00		
do at White Mouth River .....		1,200	00		
13 large Culverts, at \$20 00 each .....		260	00		
				17,910	00
To complete the Depot at Oak Point .....				400	00
				\$35,145	00
Less Value of Supplies on hand .....				5,111	00
Amount .....				\$30,034	00

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec. Red River Road.

Hull, 25th May, 1869.

(No. 4583.)

OTTAWA, June, 9th, 1869.

SIR,—I am directed to authorize you to resume operations on the Fort Garry Section of the Red River Road as soon as you may deem it proper.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

F. BRAUN,  
Secretary.

J. A. Snow, Esq.,

Superintendent Red River Road,  
Ottawa.

(No. 4640.)

OTTAWA, June 14th, 1869.

SIR,—I beg to inform you that in your capacity of Superintendent of the Fort Garry Section of the Red River Road, and entrusted as such with the expenditure of public moneys under the Government of Canada, you are required, under the Act 31 Victoria, chapter 37, section 2, to give security for the due accounting of all moneys placed under your control.

A Bond has been prepared and is now awaiting your signature, and that of your two sureties. The Bond is for \$4,000, viz: yourself in \$2,000, your two sureties in \$1,000 each.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

F. BRAUN,

*Secretary.*

John A. Snow, Esq.,

Superintendent Fort Garry Section,

Red River Road, Ottawa.

(No. 4650.)

OTTAWA, June 15th, 1869.

SIR,—With reference to the expenditure to be incurred during the ensuing year on the Fort Garry Section of the Red River Road, the amount of which has not yet been established. The Honorable the Minister directs that until further instructed, you will draw upon him at sight, through the Hudson's Bay Company's Agent, for such amounts as may be required for the payment of men and materials, and that you will forward a monthly statement of expenditure, with vouchers, in accordance with the forms supplied by the Department.

Mr. Mair, who has acted as pay master hitherto, will give you all the assistance you may require for the proper keeping of accounts and the discharge of other duties of an official character devolving upon you as Superintendent.

The Minister desires you to report from time to time regarding the progress of the works, the character of the country, the attitude and claims of the Indians, if any on the line of the road, with such general information as will enable him to advise the Government on all questions likely to arise out of the operations of the Department, and upon which the action of the Government may be required.

If any difficulty with the Indians in the vicinity of the Lake of the Woods should occur before a Local Government is organized, you will immediately confer with, and solicit the advice and assistance of the Governor, or other Chief Officer at Red River, of the Hudson's Bay Company.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

F. BRAUN,

*Secretary.*

John A. Snow, Esq.,

Superintendent Fort Garry Section,

Red River Road, Ottawa.

(No. 4706.)

OTTAWA, June 19th, 1869.

SIR,—I have the honor to transmit, for registration, as required by the Act 31 Vict., chap. 37, the accompanying bonds of S. J. Dawson and John A. Snow, Superintendents of the Red River Road.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

F. BRAUN,

*Secretary.*

E. Parent, Esq.,

Under Secretary of State for Canada,  
Ottawa.

(Copy of 7,536.)

RED RIVER SETTLEMENT,

Winnipeg, 21st June, 1869.

To the Hon. WILLIAM McDougall, C.B.,  
Minister of Public Works, Ottawa.

SIR,—In my report of 25th May, I mentioned that extensive fires were raging in the woods east of Point du Chêne, and in dangerous proximity to the road line. I afterward engaged Mr. Lonsdale, who was our foreman upon the works last winter, to inspect the entire line and take measures if necessary to prevent damage to the bridges on the route. Since then we have had frequent and heavy rains which have subdued the fires in a great measure, but not before immense injury was done to the standing timber. This is the more to be regretted, as much of this timber was young, and vast quantities of valuable wood have been destroyed by previous fires and wind falls.

It is not easy to ascertain the origin of these fires. The Indians forsake the woods in summer, and the settlers at Point du Chêne protest, that they never leave camp fires burning when cutting timber for their own use. Whatever their origin may be, it is plain enough that stringent measures for protection will have to be taken, in order to arrest the agency which threatens the total destruction of the valuable standing timber between Oak Point and the Lake of the Woods.

I have lately settled up our account for transportation of provisions from Georgetown last fall and winter with Mr. Bannatyne. There still remains a discrepancy of 5 barrels between the quantity of pork stored at Georgetown in the Hudson's Bay Co's store-house and the quantity received here; and this deficiency will doubtless be made good by the Company, whose bill for storage I have recently paid.

Since writing last, a considerable number of Canadians have arrived in the settlement, principally from the western portion of Ontario, some to examine the country, and some to settle at once. I have given such aid as lay in my power, to those desirous of visiting the various agricultural districts within convenient reach of Winnipeg, and am glad to say that so far, all who have seen the country think highly of it, and desire to remain in it. The farmer with some capital is wise no doubt to immigrate this year; but men without means must expect, under existing circumstances, to meet with many disappointments should they come to Red River this summer without being forwarded. On account of last summer's failure living is now very dear, and mechanics, for instance, who easily command 10s. sterling a day, on account of the dearness of the necessaries of life, find it a difficult thing to provide for their families. It is, for this reason, to be regretted that any should have come from Canada this summer without ample means to tide them over a season of unusual depression, and it has been and is now an especial matter for regret that public works are not in progress here, so that Canadians in the meantime might have an opportunity of supporting themselves until other opportunities offered. I have assured all who have applied to me for information, that the works will probably be resumed as soon as the Hudson's Bay Company's terms have been disposed of by Parliament, and it is greatly to be desired so, lest those who have come to this country, believing that they would receive employment on the road during the ensuing winter, should be compelled to return for lack of present support.

It is desirable moreover that means should be taken to adjust the claims of the Indians external to the district of Assiniboias. Lately a number of Canadian immigrants left here for Red River, an affluent of Lake Manitobah, with the intention of taking up lands, but were met at Portage la Prairie by a party of Chippawas, known as Yellow Plume's band, who warned them against settlement, and refused to allow them to locate their claims.

These Canadians returned to Winnipeg and represented to me the facts as above stated, declaring that unless some arrangement were made with the Indians, they would return to Canada. Upon receiving this information, I deemed it advisable to go up the Portage at once, which I did, accompanied by Doctor Schultz and a thoroughly competent and reliable interpreter.

Yellow Plume was absent, but Hiantay, Peentuno was in charge of the band, and had written authority to act for him. The other two who took part in the "talk" were sons of the old chief, Pegins, from whom Lord Sil Kirk purchased the Assiniboia tract; and all three were already men, and like the majority of Indians here, shrewd and selfish. I found them at first quite determined to resist settlement; but after representing to them that by allowing Canadians to take up claims at present, they in no way impeded their rights under government, and that these rights whatever they may be, would be fairly examined hereafter by commissioners who would deal honestly with them, and coupling this with a moderate pressure, pointing out their insignificant numbers compared with the incoming multitude, and the obvious necessity hence of acting friendly and honestly. They at length broke down and agreed to offer no further opposition to settlement.

It was evident that they had been stirred up by parties inimical to immigration, to oppose its earliest operation. But be this as it may, little difficulty, and certainly no danger may be apprehended in treating with the Indians of Rupert's Land. Over the great tract of the fertile belt they are very sparsely scattered indeed, and their appetite for rum is so intense that the most remote hope of procuring the means of their fatal enjoyment will be eagerly grasped at. The most difficult problem in this country will be to devise a method of distributing Indian annuities in such a manner that they shall be of real service to the recipients, and not find their way into the pocket of the rum-seller as soon as paid. They have no difficulty at present in procuring liquor in any quantity corresponding to their means, and the use made of it is scandalously exemplified every day on the streets of Winnipeg, by the aborigines of both sexes.

I take advantage of Dr. Schultz's approaching visit to Canada, to send you a collection of Indian curiosities, and on the 18th instant drew upon you through the Hudson's Bay Company for £100.

I am, Sir,

Your obedient Servant,

(Signed,)

D. MAIR,

Paymaster.

(Private—Copy of 7529.)

NORTH-WEST TERRITORIES,

Winnipeg, 3rd July, 1869.

DEAR MR. McDougall,—I send you by Dr. Schultz, who leaves here to-day for Canada, an Indian Chief's dress of Antelope Skin. It is beautifully made, and the workmanship is by the same persons that provided those sent to Lord March, Dr. Chedde, and other English gentlemen who have been in this country. The Doctor intends visiting Ottawa, and will give you an idea of the condition and prospects of Red River Settlement at present.

I received Mr. Snow's telegram from Ottawa last week, and immediately set about operations, and have now a large number of men on the works engaged in grubbing. It is fortunate the works have recommenced, and Canadians will now have a means of supporting themselves until the opening of spring.

Dominion day was celebrated by firing a number of shots out of anvils, hoisting the ensign, and by a bon-fire in the evening. I understand the Americans here are to celebrate the 4th, out of the Hudson's Bay Company's cannons, which I am sorry to say were silent both upon the Queen's birth day and Dominion day.

You will find the Doctor to be what he really is, a thorough Canadian, and a man, who, in the very face of his own interest, was the first Canadian in the North-West to oppose the Hudson's Bay Company, and advocate our extension here.

I thought it right to buy a quantity of pork here last week, at a bargain. The owners, miners from Montana, being about to return to that Territory, and to day I have drawn for £200—£36 10s. for my own use, and the balance to be on deposit for Government account.

With kind regards, I am,

Yours sincere,

C. MAIR.

To the Hon. Wm. McDougall, C.B., Ottawa.

(No. 4,912.)

OTTAWA, July 14th, 1869.

SIR,—I herewith forward you bonds Nos. 3224 and 3225, on the part of John A. Snow and Simon J. Dawson, respectively, for the due performance of their duties as Superintendents and Paymasters on the Red River Road, to be deposited and registered in your Department as required by the Act.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

F. BRAUN,

Secretary.

The Hon. the Minister of Finance, Ottawa.

Copy of No. 7,769.

OAK POINT,

July 29th, 1869.

Honorable William McDougall, C.B.,

Minister of Public Works, &c., Ottawa.

SIR,—I have the honor to inform you, that on my arrival here I at once despatched my assistant, with a strong party of men, to run an exploring line and open a bridle path from the termination of my survey of last winter (at White Mouth River) to the north-west angle of the Lake of the Woods. I have this day received a letter from Mr. Hamilton, stating that recent fires have passed over much of the country, and that windfalls are so numerous, and of such extent, that he has been obliged to abandon the attempt to open a bridle path.

I have, therefore, to advise you, that in case you visit this country, and come by way of Lake Superior, you will have to reach Fort Garry from the Lake of the Woods by way of the Winnipeg River.

I have the honor to be,

Your very obedient servant,

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Section,

Red River Road.

(Copy of 7,770.)

OAK POINT,

2nd August, 1869.

Honorable William McDougall, C.B.,

Minister of Public Works, &c., Ottawa.

SIR,—I have the honor to report that I arrived in this country on the seventh of July, and found the work commenced on the road, in accordance with my telegram to Mr. Mair, which, although despatched from Ottawa on the eighth of June, did not reach him till the twenty-sixth. On the twenty-ninth the work was resumed in the field.

During the past month I have been able to obtain but forty-four men, including foremen and my assistants, and twelve laborers of this number have just left to attend to their hay-making and other private business. I do not anticipate being able to obtain a large number of men till after the harvest, as nearly all the people here have more or less farming on their hands. Had the work been resumed previously to the engagement of the Hudson's Bay Company for the distant outposts, or the departure of trappers to St. Paul, many of the men engaged in which would have preferred going upon the road to leaving the Settlement, a large number of good men might have been secured at average wages.

My assistant, Mr. Hamilton, is now engaged in resuming an exploration line from the White Mouth River to the north-west angle of the Lake of the Woods, and has a party of seven men taken from the number above mentioned.

Owing to the large demand for laborers in every department here, I have been obliged to pay ordinary laborers twenty dollars (\$20) per month, and extra good men one dollar, exclusive of board; and I fear that wages will continue at these rates unless a large influx of laborers should arrive from Canada or elsewhere.

In order to advance the work of gravelling and facing, I have purchased two oxen, with the same number of carts and harness, and as constant work will be had for them a great saving will be effected, obviating much loss of time experienced in having to obtain them from the settlers. These cattle can, when no longer required, be turned into beef and used on the works.

During the month of July ten miles of road have been grubbed, and one half-mile graded. I have contracted with two good workmen to erect the depôt required, and for which the material was purchased last winter, and its erection is now in progress. The building will be 40 x 27 feet, two stories in height, the walls of flatted timber. It will be finished in a substantial manner, without any unnecessary expense, merely providing comfortable accommodation for myself and staff, with ample storage for provisions, &c., &c. On the completion of the road this building will sell for what it will cost, as it is erected on what will be the town site here.

The crops here, and throughout the entire settlement, promise an abundant harvest. The weather has been cool with occasional showers. Thermometric range for the month of July being only an average of 63°.

I have the honor to be, Sir,

Your very obedient Servant,

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec. Red River Road.

(Copy of 7,824.)

GOVERNMENT ROAD,

Oak Point, 7th August, 1869.

To the Hon. William McDougall, C.B.,  
Minister of Public Works, Ottawa.

SIR,—Considerable dissatisfaction exists, among some dozen Canadians, who have recently been employed on the works here in regard to the rate of wages. So far I have allowed them twenty dollars currency, per month, with excellent board.

Taking into consideration the expensiveness of provisions, I considered this the highest wages that should be paid. The half-breeds have made no complaint, but will expect any rate which may be fixed for the Canadians, and in my opinion should have it. It is rumoured here that Mr. Dawson is paying \$20, besides having all the



men's travelling expenses paid to and from the work. I would not trouble the Department in this matter, but otherwise, do not feel myself warranted in paying their demand, viz: \$25 per month, without the concurrence and direction of the Department. These people consider that, having paid their way to this country, they are entitled to a higher rate on that account.

An immediate reply is most respectfully solicited.

I have the honor to be,

Your most obedient Servant,

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec. Red River Road.

(Copy of 8,112.)

GOVERNMENT DEPÔT,

Oak Point, 1st September, 1869.

Hon. William McDougall, C.B.,

Minister of Public Works, &c., Ottawa.

SIR,—I have the honor to inform you, that during the month of August, three quarters of a mile of grading has been completed. One mile of fascineing gravelled, and eight and a quarter miles on dry ground, levelled and, put in good order for travelling, making in all eleven miles in good condition from the entrance to the wood eastward.

Having ascertained by day work the approximate cost of gravelling the facing in a substantial manner, I have recently let in small jobs the remainder of this kind of work completed last winter, at fifty cents per yard in length on the road, the gravel being spread over thirteen feet in width, and one foot in depth when compressed. In this way I have been able to induce parties to work on the road who could not otherwise be obtained.

The average number of men at work during the past month did not exceed thirty, including the surveying party. By the latter, the survey and exploration has been carried to within a few miles of the Lake of the Woods. My assistant, Mr. Hamilton, reports the country to be almost impassable, on account of wind falls of dry timber. He is now engaged in surveying a line for a road between this place and Fort Garry, by the south side of the River La Seine; the line surveyed by me last winter is on the north side of that river. Both lines will be required for the purpose of settlement. After this survey is completed, I shall be able to decide which line should be improved for main travel. As the harvest here is now well advanced, I hope to be able to obtain a large number of men and shall do my utmost to forward the work; the yield of wheat, barley, and potatoes will be large. The weather has been all that could be desired, dry and cool.

I have, recently, in conjunction with Colonel Dennis, despatched a Major James Wallace to St. Paul, with instructions to purchase eighteen barrels of pork and fifty bushels of beans for my next winter operations, and shall immediately send carts from here to forward these supplies from St. Cloud to this place. I have furnished Major Wallace with a sight draft on you for the sum of two thousand seven hundred dollars (\$2,700), to meet this purchase.

I have the honor to be,

Your obedient Servant,

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec. Red River Road.

(No. 5,308.)

OTTAWA, September 7th, 1869.

SIR.—In reference to your communication, under date the 7th ultimo, stating that dissatisfaction exists among some of the men engaged on the works under your charge, as to the rate of wages, and asking for advice on the subject, I have the honor to acquaint you that it is not the opinion of the Minister that excessive wages should be paid. I am further to state that the average rate of pay allowed by Mr. Dawson for ordinary labourers is \$18 per month, and in the case of men of a superior class, \$20.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

T. TRUDEAU.

Deputy Minister of Public Works.

John A. Snow, Esq.,

Government Works,

Oak Point, N. W. Territory.

(Copy of 8,441.)

OAK POINT DEPÔT, October 6th, 1869.

Honorable the Minister of Public Works, Ottawa.

SIR,—I have the honor to acknowledge the receipt of your letter of the 7th ult., with the information asked by me respecting the wages to be allowed by me to labourers on the road here.

The discontented men, referred to in my letter, had previously to the date of that letter struck for higher wages, and forced all the hands to remain idle a day and a half. Upon my promise to write you they resumed work, and continued up to the 29th of September, at noon, when they again stopped work. On the 30th I sent Mr. Hamilton to the camp with your letter, which was read to them, and explained also a letter from myself, desiring all hands that were dissatisfied to come immediately to the Depôt, receive their pay, and leave the works. On the 1st of October they all, with the exception of three or four, came to the Depot and were paid off for all the days they had worked, as returned by the foreman. And I supposed that the disaffected Canadians and American deserters would go quietly away, but instead of doing so they suddenly returned to the office in a mass, and demanded payment for the three days they had lost on account of the two strikes.

This demand I of course refused, and was determined not to pay. I told them that they should all have been charged with their board during the strikes, but I had not done so, and endeavoured to reason with them, but to no purpose. They then suddenly seized me and dragged me violently from the house towards the River Seine, in which they declared they would drown me unless I paid their unjust demand. After being dragged near the stream, upon the solicitation of my assistant, Mr. Hamilton, I paid their demand, but obliged them at the same time to sign their names opposite the sums they respectively forced me to pay. The same evening I proceeded to Fort Garry, and laid information against five of the leaders in this robbery, and four of them were apprehended on their arrival and lodged in jail. The examination before the magistrates came off on Tuesday, the 5th inst. (the reporter for the "North Wester" being excluded), when they were committed for trial before the General Court, *only for violent assault*. The prisoners have since been liberated on bail, their surety being a saloon keeper.

The work during the past month has been somewhat retarded by the disaffection of these men, but I have just succeeded in having a large number of men from the Scotch settlement, who are all quiet and well disposed people, and in a day or two I hope to have between 50 and 60 men on the works.

The road is now open for carriage travel about 20 miles, and I hope by the end of this month to have 30 miles open from the entrance to the woods eastward.

There has been a great deal of excitement here among the Canadian half-breed population, backed up by certain influential parties who are opposed to everything Canadian. The Indians have also been somewhat troublesome. The sooner Canada has a force of two or three hundred men here the better; as affairs now stand it will, I fear, be impossible to preserve order in the settlement. My position here is by no means a pleasant one, dealing with such a rough class of men, with no law-worthy of the name to support me. With the exception of the case above recited, I have succeeded beyond my expectation.

I have the honor to be,

Your very obedient Servant,

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec. Red River Road.

(Copy of 9,196.)

FORT GARRY, RED RIVER SETTLEMENT,  
December 18th, 1869.

To the Honorable the Minister of Public Works, &c.,  
Ottawa.

SIR.—I have the honor to inform you that in accordance with an instruction received from the Honorable Wm. McDougall, while detained at Pembina, the work on the Fort Garry section of the Red River Road under my charge was suspended on the seventh inst., until order and good government is again established in the Territory. At the close of the work, twenty-nine miles of the road were opened and made suitable for carriage travel, bringing the work to within one mile of the White Mouth River. The exploration of the route had been carried to Birch River, sixteen miles in advance of the work, and the line for the road decided upon; but owing to the unsettled state of the Indians, I did not deem it safe to prosecute the survey further, otherwise the whole line to the Lake of the Woods would have been located.

With respect to the disaffection of the French speaking portion of the inhabitants here, you are no doubt fully acquainted, I have only to say, that I shall refrain from meddling outside of my department.

Since the commencement of the political trouble here, I have had occasion to converse with some of the leaders of the disaffected, and I feel convinced that the speediest way of bringing matters to a peaceable termination, would be by soliciting the aid of Bishop Taché. His influence, united with that of Governor McTavish, I feel, would be sufficient to effect an amicable arrangement between Canada and the disaffected people.

I notice in the newspapers from Canada, some attacks are made upon my management here; and they assume that it has been the cause of bringing about the present unfortunate state of affairs. Time will show, that so far, at least as I am concerned, their statements are untrue. I am not aware of having made an enemy among the disaffected people, and in support of this, may state, that I am the only Government official of Canada here at liberty, and I attribute that circumstance to the good feeling existing among these people towards me.

That letters written by Canadians here, which have appeared from time to time in the newspapers in Canada, have done harm, I must admit, but I have had no hand in their production, they have been published in opposition to my wishes; my correspondence has been confined entirely to the Département as official reports, and to private matters to my family.

It may be that I shall be obliged to leave the settlement and return to Canada. Should I be obliged to do so, the depot and outfit here must be handed over to the party who have assumed the reins of Government. I shall endeavour to obtain their receipt for all left in their charge.

At the present, I am supplying about sixty-three prisoners (Canadians in prison), with two meals per day. This has been forced upon me. Colonel Dennis having left the Territory without communicating his wish in the matter. It is expected daily that they will be released, either on parol or upon condition of their leaving the Territory.

I have the honor to be,

Your most obedient servant,

(Sighed,)

JOHN A. SNOW,  
Superintendent F. G. Section Red River Road.,

(Copy of 9,320.)

HULL, 27th January, 1870.

Honorable the Minister of Public Works, &c., &c.,  
Ottawa.

SIR,—I have the honor to inform you that on account of the works on the Fort Garry section of the Red River Road being suspended, and the ultimate issue of the insurrection in the Red River Settlement very uncertain, I have deemed it expedient to return to Canada.

I left Fort Garry on the 6th inst., and arrived here yesterday. Before leaving the Settlement, I paid all demands against the works. At the Oak Point Depot I have left Mr. C. A. Heath (who has been for some time my accountant) in charge. He will remain quietly at the depot and endeavour to keep possession of the house and take care of the material stored there. I was assured by President Riel that Mr. Heath would be allowed to retain possession, provided he did not meddle in the political affairs of the Territory.

All the property of the Canadian Government in the Territory is virtually in the hands and guarded by the insurgents. But up to the period of my leaving the Settlement I am not aware that any thing had been appropriated by them, except two horses taken from Colonel Dennis.

My assistant, Mr. Hamilton, has returned with me; he had been a prisoner one month, and was only allowed his liberty on my promise that he should immediately leave the Territory. Stewart D. Mulkins, a nephew of Colonel Dennis, also returned to Canada with me. He had been also a prisoner, and was released upon the same terms as Mr. Hamilton.

I shall shortly lay before you my accounts, showing the entire expenditure for all purposes on the work under my charge to date.

I have the honor to be

Your very obedient servant,

(Signed,)

JOHN A. SNOW,  
Superintendent Fort Garry Sect. Red River Road.

(Copy of No. 9,635).

HULL, 21st February, 1870.

To the Honorable the Minister of Public Works of Canada,  
Ottawa.

SIR,—On the 18th September, 1868, I had the honor to receive, from the Honorable Wm. McDougall, C.B., then Minister of Public Works, instructions authorizing me to proceed to the Red River Settlement, Hudson's Bay Territory, and to commence the opening of a road from Fort Garry to the Lake of the Woods, on the route recommended by S. J. Dawson, Esq., C.E.

My instructions authorized me to purchase a quantity of provisions and tools, and to take steps to forward them, without delay, to the scene of operations, in order to afford employment, as early as possible, to the distressed population of that country, and thereby, in some measure, alleviate their sufferings, brought on by the sad and unusual calamity which had befallen them, owing to the almost entire loss of their crops.

I left Ottawa for Red River on the 19th September, and arrived at St. Paul on the evening of the 23rd. After purchasing the necessary quantity of supplies, and arranging for their transport to Georgetown, on the Red River, I wrote to Mr. A. G. B. Bannatyne, of Winnipeg, to send the requisite number of carts to meet the supplies at Georgetown and convey them thence to the settlement. I then proceeded to Fort Abercrombie, where I was joined by Mr. Charles Mair, who had received the appointment of paymaster and accountant on the work, and continued in company with him to Fort Garry, where we arrived on the 27th October.

In accordance with my instructions, I called upon Wm. McTavish, Esq., the Governor of the Hudson's Bay Company, before whom I laid my instructions, and received his verbal consent to carry on the work.

Upon examination, I found that a good ordinary prairie road already existed from Fort Garry to the entrance of the woods, near a place called the Oak Point Settlement, and distant about 30 miles east from Fort Garry. I consequently deemed it expedient, to confine my operations to the wooded section of the country, that extends, without interruption, to the Lake of the Woods, and made all necessary preparations to prosecute the work, as speedily and advantageously as possible. Operations at that season of the year, being of necessity preliminary and preparatory to the due completion of the road at a more favorable time.

Taking the line already marked out by Mr. Dawson, as the basis of my operations; I explored the country through to the Broken Head River, about 15 miles; and having permanently located a few miles, I commenced the work of clearing the track of timber, on the 9th of November, from which time, till the 1st of April, about 40 men were employed, besides a large number of teams were engaged in hauling timber and brush required for fascines. To the laborers 2s. 9d. sterling a day was allowed with board, and one foreman was employed, who received during the months of November, December, and January 5s. sterling per day, and subsequently 6s. 3d. sterling. Payment being made chiefly in provisions, at the following rate:—for pork 24cts. per pound, flour at Fort Garry \$16 79cts. per barrel, the balance in cash to enable them to purchase such articles as they required. During the period of operations 28 miles of the track had been cleared of timber to the width of sixty-six feet, and  $2\frac{1}{4}$  miles of swampy ground laid with fascines. I also erected, for the accommodation of the men, five shanties, which were located at intervals along the route.

During the progress of the work, I personally explored the country through to the White Mouth River, and located the line to that point; making, in all, 30 miles of line in the wooded section definitely fixed. I also surveyed a line from the commencement of my work, across the prairie section, to a point on Red River a little below Fort Garry, about 30 miles.

As no accommodation suitable for our requirements was to be obtained in the locality for a depot, I found it necessary to take steps during the winter to provide timber for the erection of one, to answer the necessary requirements, upon the site found to be most convenient, though the erection was deferred till this summer.

On the 24th February, I received a communication from the Department, stating the amount already advanced to me and to Mr. Joseph McDougall, who had been commissioned to attend to the purchase of additional supplies at St. Paul, on my account; and observing that the funds at my disposal would soon be exhausted, I gave orders to Mr. Mair to close the work, as soon as the spring opened. Finding it necessary to consult with the Department, respecting the further prosecution of the work; on the 16th of March I left for Ottawa, and there made a report. On my way, returning to Canada, I contracted with Dr. J. C. Schultz, to forward, in flat-boats by Red River, the provisions then lying at Fort Abercrombie and Georgetown, to Fort Garry, at 5s. stg. per 100 lbs. The Doctor assuming all risk attendant upon the navigation. These supplies consisted of 200 barrels of flour, and 25 barrels of mess pork, then stored at Abercrombie, and 51 barrels of flour and 16 barrels of mess pork at Georgetown.

On the 9th of June 1869, I received instructions to resume operations; I accordingly telegraphed to Mr. Mair, to commence the work on receipt of my communication, and I at once started for the Red River settlement, where I arrived on the 6th of July.

On my arrival, I found the supplies which I had contracted with Dr. Schultz to forward, had arrived safely, and were in store at his establishment. On the 21st of July I contracted with Mr. Alfred Boyd, (of the firm of Inkster & Boyd) for the supplying of 50 head of beef cattle, averaging 700 lbs. each, to be delivered at Oak Point depot, in such quantities and at such times as required; up to the 1st day of December, the balance of the animals on hand at that date, to be then slaughtered, and the beef delivered at the Depot, the price to be 4½d sterling per lb. for the net beef; and the payment to be made on the 1st day of November, for the entire quantity contracted for, upon their furnishing security for the due fulfilment of the contract.

About the 20th August, Colonel Dennis arrived in the settlement, he was provided with a letter to me from the Minister of Public Works, in which I was desired to give him all the assistance in my power, in the way of supplying him with such provisions as I had in store, that he required. The supplies furnished him will be stated at the close of this report. At his suggestion, it was deemed advisable to secure an additional supply of pork, bacon and beans, before the close of the season, and on the 31st of August Major Wallace was despatched to St. Paul with instructions to purchase a supply for us, and carts were sent to St. Cloud to forward them to Fort Garry. The provisions arrived in due course of time, and were stored together at the establishment of Dr. Schultz at Winnipeg, where they were subsequently taken possession of by the insurgents.

The work was resumed this season on the last day of June, and continued up to the 6th day of December last, when owing to the political troubles, resulting in the stoppage of the Hon. Wm. McDougall at Pembina, it was closed in accordance with an order in writing received from him, bearing date the 19th November, and received by me on the 25th. The work this season has consisted in completing the clearing of the track, a distance of 29½ miles; in grubbing and levelling 24 feet in width of the centre of the track; the 2½ miles of fascines laid last winter, and 48 chains additional, have been covered with gravel to the depth of one foot, and a width of 13 feet. Three and a quarter miles of the road have been graded, from ditches cut on either side, and five culvert bridges built.

A dépôt has been erected at Oak Point, about 1½ mile east, from the entrance to the woods, and within the site recommended by Mr. Dawson as a town plot. It consists of a house, 40 feet in length by 27 feet in width, and is well and substantially built of flatted tamarack timber. It is two stories high, being well floored with tongued and grooved lumber. The lower story is divided into a spacious hall, a large store room, an office and kitchen. The upper consists of a sitting room and four bed rooms. The whole being well lighted, and admirably adapted for the purpose intended.

During the summer I employed my assistant, Mr. Hamilton, in surveying an exploring line from White Mouth to Birch River, a distance by his traverse lines of 17½ miles, and the line for the road located, but not surveyed that distance; he also performed a cursory survey a further distance of about 9 miles, bringing his exploration to within a short distance of the Lake of the Woods. Having become intimately acquainted with the prairie country lying between Oak Point and Fort Garry, I found that the line surveyed by me last winter, although a good winter road, was not so susceptible of being improved to form a road at all seasons, as I had imagined from travelling the route in winter; and that a better line for a road existed, and was travelled, to the southward of the River Seine. This line was surveyed and located from the entrance to the woods, to its intersection with the main road, on the east bank of the Red River, above Fort Garry, which it joins at the distance of 31 miles and 29 chains. The survey was continued to the point opposite Fort Garry, along the main road, a further distance of 1 mile and 46 chains, making a total distance, from the entrance to the woods, of 32 miles 76 chains. This line, although about 2½ miles longer than that surveyed by me last winter, and

described in my report of the 4th of May, 1869, is much superior to it for the purpose of forming a good summer road, the line being for the most part on dry ground. A plan is in preparation, which will be laid before you, shewing the features of the prairie, traversed by both lines, and it will be for the Department to decide which line should be improved for a permanent road. It will no doubt be necessary, for the purposes of settlement, to preserve both these lines as main roads; being separated as they are nearly throughout by the River La Seine; along both sides of which the Oak Point Settlement is situated.

During the whole of the past season laborers were extremely scarce in the settlement, caused by the unusual demand, for agricultural purposes; and as our operations commenced late in the season, the men that would have engaged in my service, had left the settlement in the employ of the Hudson's Bay Company, in making their annual trips to the Saskatchewan and York Factory; in consequence of which only a limited number of men could be obtained, and these of course, not the best the country could afford. After the return of the men employed in tripping for the Hudson's Bay Company. The insurrection arising among the French half-breed population, drew away the majority of these men, upon whom I had counted for advancing the work, during the fall months; besides confusing and rendering unsteady the half-breeds, who were already employed upon the work. I must however state, that the conduct of the French half-breeds employed, was with very few exceptions respectful, and their labor honestly performed; and that the disaffection that occurred during the summer (as reported in my letter of the 6th October last), among the men employed, was almost entirely confined to Canadians, and deserters from the American army.

Finding that but little progress could be made by day work, and the people of Oak Point Settlement offering to take small jobs; I decided to employ them in that manner. Copies of the agreements entered into, with the several parties, will be furnished if required. The uniform rate of £4 sterling per month, was paid to laborers, and to some extra good men five shillings currency, since the first of July. The men whose names are entered on the pay lists, have been paid entirely in cash.

As the plan which will be laid before you will shew the features of the country over the entire line surveyed, and the remarks thereon describe the character of the soil; it is perhaps unnecessary for me here, to give a detailed description on this subject; I may however state briefly, that the prairie traversed by both lines, surveyed by me, possesses every inducement to the settler, with the exception of a scarcity of wood, in some places. There is a sufficient quantity of dry prairie for cultivable purposes, and advantages for hay, which is always obtained in the low lands. Water is also abundant and good. The road through the wooded section, consists of a succession of gravelly and sandy ridges, extending in their largest diameter, in the direction of the road; these are separated by open meadows, or by tamarack, or spruce swamps, across which fascines have been laid. The ridges are so dry generally as not to require grading; in fact, the addition of grading, by throwing in loose soil, would injure the road instead of improving it. Some additional grading, however may be required, on the part now opened, after the road has been travelled on some time. This character of country may be said to extend to Birch River, which will be about 40 miles of the wooded section; beyond this point, as far as explored, there will be a much larger proportion of swamp; and in order to make a good road, timber foundation will be required.

An inspection of the accounts will shew that the prices for supplies of all kinds have been very high, owing to their having generally to be transported nearly 500 miles in carts, the lowest charge for which is 16s. sterling per 100 lbs, and the great scarcity of last season necessitated the purchase of nearly all our provisions at St. Paul, and their transport thence to the works, thereby greatly augmenting the cost of the road. Mr. Dawson's estimate for the portion of road now opened was \$1,000 per mile, this estimate was made at a time when everything was abundant in the settlement, in fact, the cost of boarding men at that time (1868) could not have been more than one-half it is at the present time.

Up to the 31st of January last, the amount expended for all purposes was as follows:—

Amount of my account to date - - - - -	\$34,338 87
do of draft drawn by Joseph McDougall - - -	5,110 10
Advanced by Department to Mr. Mair on account of his salary - - - - -	1,150 00
	<u>\$40,598 97</u>
LESS.	
Approximate value of stock on hand, per statements 1, 2, 3, herewith, - - - - -	11,284 32
Value of supplies furnished to Col. Dennis, per statement No. 4, herewith, - - - - -	1,574 19
Value of horses, &c., bought by me, but retained by the Hon. Wm. McDougall, - - - - -	466 73
	<u>\$13,325 24</u>
Total expended by me - - - - -	<u>\$27,273 73</u>

Owing to some portions having been performed after the frost set in last fall, it was found impossible to make a finished job, in some places, especially where levelling had been done with frozen soil. There are also some boulders in the centre of the track, which owing to the great difficulty in extracting them from the frozen ground, it was not deemed profitable to take out in the winter season. To cover this a further expenditure of about \$1,000 will be necessary to make a complete and permanent road of the 29½ miles now under consideration.

By referring to the accompanying statements it will be seen that a large quantity of supplies were in store, and that with the exception of a few minor necessities, a sufficiency was on hand for the vigorous carrying on of the work well nigh to completion.

Had it not been for the unfortunate and unforeseen occurrences resulting in the stoppage of the work, the road, in all probability, would have been opened to the Lake of the Woods in the Spring, or at least, early in the ensuing summer.

Anticipating your letter of the 7th January, after the suspension of the work, I, as far as possible, settled all outstanding accounts, and putting Mr. C. A. Heath in charge of the depot and effects in store there, with Mr. F. Johnston as companion, on the 6th of January I started for Ottawa and arrived there on the 26th.

In conclusion, I beg to state, that in the conduct of the work intrusted to me, I have endeavoured, to the best of my ability, to carry out my instructions.

The whole being humbly submitted,

I beg to remain,

Your obedient servant,

(Signed,)

JOHN A. SNOW

Superintendent Fort Garry Section Red River Road.



## No. 1.

STATEMENT of Supplies at Red River Settlement, on the 20th November, 1869,  
paid for by John A. Snow.

	£ s. d.	\$ cts.
18 barrels of flour, stored with J. B. Valliquette, at Oak Point; approximate value at \$13 12.....		246 16
14 barrels and 61 lbs of flour, stored with Norbert Morin, at \$13 12.....		187 76
140 barrels flour, in Dr. Schultz's store-house, at \$12 62.....		1,766 80
6 barrels mess pork, and 158 lbs, in Dr. Schultz's store-room, at \$30 00 per barrel		213 14
5 barrels mess pork to be accounted for by Hudson's Bay Company, at 24cts.....		240 00
Per Voucher B, with accounts stored at Dr. Schultz's store (Winnipeg), being part of Major Wallace's purchase, for 4 barrels pork, (greenbacks) \$1,370 00		
4,000 lbs bacon, purchased by Major Wallace, per Voucher B,..... \$800 00		
Charges thereon at St. Cloud..... 85 25		
Gold at 133..... \$2255 25		1,695 68
Part payment on 60 barrels pork and 2,000 lbs bacon, purchased by Major Wallace, per Voucher H, \$834 47 (gold at 133).....		627 41
Paid transport on Major Wallace's and Mr. Mair's purchases to James McKay.....		479 58
Paid transport on ditto to Dr. Schultz.....		387 51
9 barrels pork purchased by Mr. Mair (say).....		231 76
17 head of beef cattle, in the keeping of A. Boyd, Esq., Winnipeg, being part of his contract with me, to average 700 lbs beef each, at 44¢.....	223 2 6	1,085 88
220 bushels potatoes, in cellar at Oak Point Depot, cost 2/3 per bushel.....		120 45
Total.....		\$7,282 13

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Section,

Red River Road.

Hull, 14th February, 1870.

## No. 2.

STATEMENT of the approximate cost of Government Depot, at Oak Point, Red River Settlement, and effects, &c., therein.

	£ s. d.	\$ cts.
Depot house 27×40, two stories high, finished, including fixtures, also stable 20×27 feet .....		1629 94
2 large tables at 15/-, two small ditto at 10/- .....	2 10 0	
1 chair 10/-, ½ dozen chairs, 5 at 6/-, 1 at 5/-=35/-; 2 bedsteads at 30/- .....	5 5 0	
1 looking glass 10/-; 1 metal basin 3/6 .....	0 13 6	
3 mattresses, 2 at 29/-=58/-; 1 mattress at 15/- .....	3 13 0	
1 cooking stove and fixings .....	9 15 0	
3 box stoves 110/-, 120/-, and 70/- .....	15 0 0	
1 clock 17/6; 2 coal oil lamps 4/6 and 3/6 .....	1 5 6	
1 large coal oil lamp 17/6; ½ dozen lamp glasses at 1/- each .....	1 3 6	
46 joints new stove pipe at 2/3=103/6; 4 elbows at 3/-=12/- .....	5 15 6	
1 dumb stove 40/-; 4 stove pipe safes at 10/-=40/- .....	4 0 0	
½ dozen tumblers at 1/-=6/-; cups and saucers, 1 dozen at 12/- .....	0 18 0	
9 dinner plates, 6/-; 3 jugs, 2/6, 1/6, 1/-=5/-; sugar basin, 2/6 .....	0 13 6	
1 wash basin and ewer, 10/-; ½ dozen knives and forks (common) 5/7½ .....	0 15 7½	
5 wooden pails at 2/6=12/6; six butcher knives at 2/6=15/- .....	1 7 6	
1 tin dipper, 1/3; 6 frying-pans, 3 large at 7/6=22/6, 3 small at 3/6=10/6 .....	1 13 0	
1 wash board, 3/6; 1 lantern, 5/-; 1 teapot, 2/6 .....	0 11 0	
2 table cloths, 12/-; 4 towels at 1/6=6/-; 2 candlesticks at 1/6=3/- .....	1 1 0	
4 pairs four-point blankets, at 40/- .....	8 0 0	
2 quilts at 18/-=36/-; 6 gallons coal oil, at 8/9=52/6 .....	4 8 6	
5 gallons linseed oil and can .....	2 3 4	
1 set platform scales and weights .....	2 0 0	
1 small oil can .....	0 5 0	
	£72 17 5½	351 65
Total .....		\$1984 59

(Signed,)

JOHN A. SNOW,

Supt. Fort Garry Sec.,

Red River Road

Hull, 14th February, 1870.

## No. 3.

STATEMENT of Stock on hand at the Government Depot, Oak Point, on the 20th November, 1869.

	£	s.	d.	\$	cts.
7 working oxen, cost £13 each (5 wintering at A. Boyd's, and 2 at Depot, Oak Point).....	91	0	0	442	87
1 house purchased by Mr. Mair, estimated at.....				147	53
2 sets buggy harness, at \$18.....				36	00
1 buggy, not new (present value).....				100	00
10 sets ox harness, 30/- each (good).....	15	0	0	73	00
12 tumbling carts at 65/- (want repair).....	33	0	0	160	60
2 ploughs (new) 152/2 and 124/-.....	13	16	2	67	20
2 heavy logging chains (new).....				35	28
1 cutter (new).....	10	0	0	48	67
1 saddle (new).....	8	10	0	39	11
1 bridle, 10/- (new).....				2	43
6 skin tents in good order at 80/- (good).....	24	0	0	116	53
2 skin blankets at 10/- (good).....	1	3	0	6	09
5 pairs snow shoes at 10/- (good).....	2	10	0		
1 ox yoke, 15/- (good).....	0	15	0		
2 scythes and snaths (new).....	1	7	0		
3 augers, 1 in. 1 in 1½ in. (good).....	1	2	6		
3 three cornered files at 9, 2/3, and four flat at 1/9, 7/- (new).....	0	9	3		
1 whitewash brush, 2/6; two pitchforks, 18/-.....	1	0	6		
1 buggy wrench, 2/6; 1 pit saw, 32/-; 1 cross cut, 20/-.....	2	14	6		
23 lbs. inch rope, 34/6; 2 sets candle moulds, 3/9.....	2	2	0		
1 broad axe, 16/-; 1 cotton tent, 25/- (old).....	2	1	0		
1 iron wedge, 1/6; 4 small axes at 5/- each, 20/-.....	1	1	6		
74 axes at 3/9 (partly old).....	13	17	6		
43 shovels (good) at 6/-.....	12	18	0		
27 spades (good) at 6/-.....	8	2	0		
33 grub hoes (midding) 7/6.....	12	7	6		
1 sledge hammer, large, 18/-; 1 small 6/-.....	1	4	0		
1 set match planes, 10/-; 1 jointer, 14/-; 1 chalk line, 1/-.....	1	5	0		
2 two inch chisels, 3/- & 6/-; 1 inch, 1/6.....	0	10	6		
1 ½ inch chisel, 2/-; 1 cold chisel, 2/6.....	0	4	6		
1 spokeshave, 3/-; 1 draw knife, 6/-.....	0	9	0		
1 jack plane, 10/-; 1 smoothing plane, 7/6.....	0	17	6		
1 rope, 12/-; 1 trying square, 12/-; 1 scratch awl, 1/-.....	0	19	0		
3 hand hammers at 2/6, 7/6; 1 builder's square, 3/6.....	0	11	0		
1 branding iron, 5/-; 2 halter chains at 2/6.....	0	10	0		
8½ dozen tea tins at 10/-, 87/6.....	4	7	6		
1 keg whitelead, 42/-; 1 tump line, 5/-.....	2	7	0		
6 tea pans, 2 small at 2/6, 5/-; 4 large at 5/- = 20/-.....	1	5	0		
2 wash basins, 2/3, 4/6; 11 tin pails (old) 3/6 each, 38/6.....	2	3	0		
6½ dozen flat tin plates at 8/-; 2 metal bake ovens at 14/- = 28/-.....	4	0	0		
5 crowbars at 20/- each.....	5	0	0		
4 grindstones, 2 new at 55/-, 110/-; 2 old at 10/-, 20/-.....	6	10	0		
4 padlocks at 2/6.....	0	10	0		
4 turnpike scrapers (now lying at Georgetown, new).....	£95	1	3	462	62
				41	18
				\$1,779	11
ARTICLES BROUGHT HOME, THE PROPERTY OF THE DEPARTMENT.					
4 pairs blankets at 36/-.....	7	4	0		
2 tanned buffalo skins at 10/-.....	1	0	0		
3 buffalo robes at 20/-.....	3	0	0		
2 tump lines at 5/-.....	0	10	0		
Carried forward.....	£11	14	0	\$1,779	11

## STATEMENT of Stock.—Continued.

ARTICLES BROUGHT HOME, &c.—Continued.		£ s. d.	\$ cts.
<i>Brought forward.</i>		11 14 0	1,779 11
1 india rubber blanket			5 00
1 aneroid barometer, \$24; 1 microscope, \$44			68 00
1 field glass, \$15; 1 maximum and minimum thermometer, \$5			20 00
1 salometer			1 25
1 cotton tent	3 0 0		
1 buggy cover	2 10 0		
1 cash box	1 0 0		
1 double-barrel gun			23 57
	18 4 0		88 57
Total			1,990 50
4 knives and forks at 5/4 sterling each, and 1 large do at 10/	1 11 4		7 63
1 surveyor's compass at 80/ (omitted above)	4 0 0		19 47
			\$2,017 60

(Signed)

JOHN A. SNOW,

Supt. Fort Garry Section,

Hull, 14th February, 1870.

Red River Road.

No. 4.

STATEMENT of Supplies furnished to Col. Dennis, and for which I hold his receipts.

<i>Flour.</i>	£ s. d.	\$ cts.
14 barrels and 137 lbs. at \$12 62 cents per barrel		185 50
<i>Pork.</i>		
8 barrels at \$30 per barrel		240 00
<i>Beef.</i>		
9,335 lbs. at 4 1/4 d. Part of H. Boyd's contract with me	175 0 7 1/2	851 82
Paid expenses, driving animals	9 0 0	43 80
4 animals supplied alive, at £13	52 0 0	253 07
		\$1,573 19
		\$ cts.
The following was supplied to the Honorable William McDougall by Major Wallace, and has been paid for by me, viz.:—Major Wallace's expenses in purchasing horses	13 75	
Cash paid by him for one span horses	415 00	
" " harness	40 00	
" " wagon	142 00	
" " cover	7 00	
" " whip	1 50	
" " surcingle	1 50	
Gold at 133	620 75	466 73
Total		\$2,040 92

(Signed)

JOHN A. SNOW,

Supt. Fort Garry Section,

Hull, 14th February, 1870.

Red River Road.

HULL, 14th March, 1870.

To the Honorable the Minister of Public Works, &c., &c.,  
Ottawa.

SIR,—In reply to your letter of the 11th inst., I have the honor to lay before you the following statements:—

1. The length of road constructed west of the Lake of the Woods, on the Fort Garry Section of the Red River Road, is  $29\frac{1}{4}$  miles.

2. The work begins at the junction of the prairie with the wooded country, 30 miles eastward of Fort Garry, and ends near the White Mouth River. The road is cleared to the width of sixty-six feet, and twenty-four feet of the centre of the track is grubbed and levelled. The road-way is eighteen feet wide between ditches.

3. In the  $29\frac{1}{4}$  miles constructed,  $3\frac{1}{4}$  miles have been graded from ditches cut at the side of the road-way, and  $2\frac{1}{4}$  miles and 508 feet of swamp, crossed by the road, has been substantially fascined with timber and brush. On this foundation one foot of gravel and earth, in average depth, has been spread over thirteen feet in width. The width of the fascines is from seventeen to eighteen feet.

4. Five culvert bridges have been required, three of which are over small streams. One is called Broken Head River, and is 33 feet wide. The culverts are rough, strong structures, and built entirely of tamarack timber.

5. There are no cuttings or embankments on this road exceeding two feet in height or depth, and no measurements for contents have been made.

6. The work on the road has been chiefly performed by men employed by the day and boarded, consequently the cost in items for each kind of work cannot be stated.

The subjoined statement shows the number of persons employed immediately on the road each month, from its commencement on the 9th of November, 1868, to the close, on the 6th of December, 1869, exclusive of the superintendent and paymaster, who have been employed continuously:

Month.	Assistant Surveyor.	Time-keepers and chain bearers.	Foremen.	Laborers.	Remarks.
1868.					
November .....		1	1	21	
December .....		1	1	42	
1869.					
January .....		1	1	39	
February .....		1	1	49	
March .....		1	1	64	
April .....			1	8	Work suspended on the 1st. These men retained, to be on hand to guard the works against fire.
May .....			1	7	
June .....	1		1	15	Work resumed on the 30th ult.
July .....	1	2	1	49	Assistant Surveyor arrived at Red River Settlement on the 6th July.
August .....	1	2	1	40	
September .....	1	2	1	46	
October .....	1	2	1	48	
November .....	1	2	1	46	
December .....	1	2	1	21	Works closed on the 6th. Two men left in charge of depot. Superintendent and assistant surveyor returned to Ottawa.

From November, 1868, to March, 1869, I was, at different times, engaged in surveying, and for this purpose required the service of a chain-bearer and five laborers

whom I took from among the number employed in the construction of the road. When the survey was not in progress these men were returned to their ordinary work without loss of time. During the period above mentioned sixty miles of road line was surveyed and located.

Between the 6th of July and the 6th of December, 1869, my assistant surveyor was employed in further surveying and exploring the country between White Mouth River and the Lake of the Woods. He also located a line for a road on the south side of the River La Seine, from the entrance to the woods to opposite Fort Garry. On this service he employed two chain-bearers and the necessary axemen. The cost of his operations may be stated as follows:—

Mr. Hamilton's services, from the 19th June, 1869, to the 28th February, 1870 .....	861 64
Chain bearers .....	267 60
Other assistance .....	302 01½
Total, exclusive of Board .....	\$1,431 25½

The following work on the road has been performed under Contract, the cost of which is as follows:—

Contract No. 1, D. & F. Nolin.	Gravelling 1,406 lineal yards of road, at 2s. sterling .....	140 12 0
Contract No. 2, D. & F. Nolin.	Gravelling 950 lineal yds. of road, at 2s. sterling .....	95 18 0
	Brushing fascines .....	15 0 0
	Fascineing and gravelling 14 <sup>8</sup> / <sub>10</sub> rods lineal, at 25s. ....	18 8 2
		£269 18 2 or \$1313 56

Contract No. 3, François St. Luke	Grubbing and levelling 3 miles at, £16 13 4 per mile .....	£50 0 0
	Gravelling 206 lineal yards, fascines, at 2s. ....	19 12 0
	Extra work in levelling .....	5 0 0
	1 small culvert bridge .....	2 0 0
Contract No. 4, François St. Luke	Ditching and grading 23½ rods lineal, at 4s. ....	5 15 0
	Constructing and gravelling 6 rods lineal, fascines, at 25s. ....	7 10 0
	Grubbing and levelling 1½ <sup>14</sup> / <sub>80</sub> miles, at £30 .....	35 5 0
		£125 2 0 or \$608 83

Contract No. 5, Baptiste Morin.	Constructing and gravelling 61 <sup>7</sup> / <sub>11</sub> rods lineal, fascines, at 25s. ....	77 0 0
	Grading 28 <sup>10</sup> / <sub>8</sub> rods lineal, from side ditches, at 3s. ....	4 5 2½
	Paid on account of grubbing and levelling done on 1½ mile .....	44 0 0
		£125 6 1½ or \$609 83

Contract No. 6, Louis Archibald.	Grubbing and levelling, 1½ miles .....	£40 0 0 or 194 67
Contract No. 7, Norbert Morin.	Do. do. 1 mile .....	20 0 0 or 97 33

Contract No. 8, Antoine Vandal.	Grubbing and levelling, 1 mile.....	£20 0 0 or	\$97 33
Contract No. 9, Dominick Ducharme.	Do. do. 1 mile.....	15 0 0 or	73 00
Contract No. 10, J. B. Gournette.	Ditching and grading 158½ lineal rods, at 4s. ....	31 12 7½	
	Gravelling 170 yards, fascines, at 2s. ....	17 0 0	
		£48 12 7½ or	236 67
			<u>\$3,231 22</u>

Of this amount, expended for work done by contract, \$3,024 49 was paid in cash, and 206 73 in provisions.

\$3,231 22

The following is a statement of the amounts made chargeable to the section of road under my supervision, viz:—

Amount of my account current, rendered to 31st January, 1870, in accordance with the statement in my report of the 21st February, 1870.....	\$34,338 87
Allowance to Mr. Hamilton for the month of February, as in statement of surveying party herewith.....	100 00
Amount of Mr. Jos. McDougall's account as rendered to the Department .....	7,089 21
Advanced by the Department to Mr. C. Mair, Paymaster, on account of salary and disbursements.....	1,350 00
	<u>\$42,878 08</u>
From which may be deducted the value of provisions and stock on hand, as per statements Nos. 1, 2, and 3, accompanying my report above mentioned .....	\$11,284 32
Value of supplies furnished to Col. Dennis, as per statement No. 4 .....	1,574 19
Value of horses, wagon, &c., paid for by me, but retained by the Honorable Wm. McDougall .....	466 73
	<u>13,325 24</u>
	<u>\$29,552 84</u>

It will be seen that the total amount here stated differs from that in my report above mentioned by the sum of \$2,279.11. This difference consists of the sum of \$1,979.11 of Mr. McDougall's account, of which I had not then been informed; and the sum of \$200 advanced to Mr. Mair for disbursements omitted, and the sum of \$100 allowed to Mr. Hamilton for the month of February, 1870.

All of which is most respectfully submitted.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed),

JOHN A. SNOW,

Superintendent.

(No. 6.777.)

OTTAWA, 19th May, 1869.

SIR,—As the best season for active operations, in opening the communication between Lake Superior and the Red River Settlement, has now arrived, I would respectfully suggest the expediency of proceeding as soon as possible with the work on the road leading from Thunder Bay to the navigable waters of the interior section.

The construction of this road is a necessary preliminary step to further works, whatever scale of improvement may be eventually decided on, as explained in my report now being printed, a portion of which is herewith enclosed.

By commencing on a moderate scale, the outlay immediately required would be but small, and operations might be gradually extended as the season progresses. In the first place, workmen have to be engaged, material provided and supplies purchased, and if the funds necessary for the preliminary organization could be obtained, it would greatly facilitate and expedite further arrangements.

The sums required for the respective works proposed to open the preliminary line of communication are set down in the printed document enclosed, but as above stated, a comparatively small sum at the outset would be sufficient to initiate the work.

I have the honor to be, Sir,

Your most obedient Servant,

S. J. DAWSON.

Honorable WILLIAM McDUGALL, C. B.,  
Minister of Public Works, &c., &c., &c.  
Ottawa.

(No. 4,584.)

OTTAWA, June 9th, 1869.

SIR,—I am directed to authorize you to resume operations on the Lake Superior Section of the Red River Road, as soon as you may deem it proper.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,  
Secretary.

S. J. DAWSON, Esq.

Superintendent Red River Road,  
Ottawa.

(No. 4,639.)

OTTAWA, June 14th, 1869.

SIR,—I beg to inform you that in your capacity of Superintendent of the Lake Superior Section of the Red River road, and entrusted as such with the expenditure of public moneys under the Government of Canada, you are required under the Act 31 Vic., chap. 37, sec. 2, to give security for the due accounting of all moneys placed under your control. A Bond has been prepared and is now awaiting your signature and that of your two sureties. It is for \$4,000, viz:—yourself in \$2,000, and your two sureties in \$1,000 each.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,  
Secretary.

S. J. DAWSON, Esq.

Superintendent Lake Superior Section Red River Road,  
Ottawa.



(No. 7,045.)

OTTAWA, 14th June, 1869.

SIR,—I have the honor to acknowledge the receipt of your letter of this date, and, in reference thereto, beg leave to inform you that I have this day given security for the due accounting of all moneys that may be placed under my control, as required under the Act 31 Vic., chap. 37, sec. 2.

I have the honor to be, Sir,  
Your most obedient servant,

S. J. DAWSON.

F. BRAUN, Esq.,  
Secretary, Department of Public Works,  
Ottawa.

(No. 7,242.)

MONTREAL TELEGRAPH COMPANY,

Ottawa, July 5th, 1869.

*(By Telegraph from Toronto.)*

To F. BRAUN,  
Secretary.

Men leaving Collingwood with me to-morrow. With those already at Fort William, will make force two hundred (200). Material and supplies in quantity being sent. What are the arrangements in regard to funds?

S. J. DAWSON.

(No. 7,362.)

# REPORT ON THE LINE OF ROUTE BETWEEN LAKE SUPERIOR AND THE RED RIVER SETTLEMENT, BY S. J. DAWSON, Esq., CIVIL ENGINEER.

OTTAWA, 1st May, 1869.

SIR,—I have the honor to submit to your notice a report on the subject of opening the communication between Lake Superior and the Red River Settlement.

The country to be traversed is rocky and mountainous on the borders of Lake Superior, but, at a short distance in the interior, a high plateau is attained, where the waters of the St. Lawrence and the Winnipeg have their common source. The lowest pass in this elevated region is 839 feet above the level of Lake Superior, or 1,479 feet higher than the surface of the sea. Proceeding to the westward, the descent, by the watercourses is very gradual, amounting only to 450 feet in a distance of some three hundred miles. The country, nevertheless, continues rocky and mountainous as far as Fort Frances, where the eastern border of the great silurian belt, which underlies the flat region to the west, is reached, and from thence to the Lake of the Woods the country is comparatively level and the navigation uninterrupted.

In the region between the high plateau of the water-shed and Fort Frances, the valleys between the mountain ranges are occupied by deep lakes, and those on one of the routes which have been followed occur in such close succession, and are, otherwise, so advantageously situated in relation to each other, as to afford an easy means of obtaining continuous navigation, at a moderate outlay, and this, too, in a region where rock, mountain, and water are so commingled as to render it exceedingly difficult to establish lines of land transport.

The scheme of opening the communication proposed in the following and in previous reports, has for its ultimate object a railroad from Lake Superior to the navigable waters of the interior; navigation rendered continuous, by means of lock and dam, from its terminus to the north-west angle of the Lake of the Woods, and a railroad from the latter point to Fort Garry.

The railroad at Lake Superior would be forty miles in length. The navigation, commencing at its terminus, would cover a distance of three hundred and eleven miles, and would be connected, at its western extremity, by a railroad of ninety miles with Fort Garry.

Some years must elapse in carrying such extensive works to completion. In the meantime, it is proposed to open the communication as speedily as possible, by good waggon roads connecting the navigable waters of the central section with Lake Superior at the one end, and with Fort Garry at the other. And, at the same time, to lessen the number of trans-shipments, in the region of the Lakes, by such preliminary works as could be rapidly carried out.

By adopting a progressive system of this sort, a first-class communication would be attained as quickly as by any plan that can be adopted.

The first preliminary works would attract the trade of the North-West Territories to Lake Superior, and their enlargement and extension might be proceeded with as fast as possible, or as the means of the country would permit, always going on with those which were most wanted and would in turn produce the greatest effect, until the whole were completed.

Good waggon roads at either end of the navigable section, combined with a little improvement in the region of the Lakes, would at once give to the people of the Red River Settlement a better means of obtaining their supplies than that which they now possess, and would, at the same time, afford to immigrants the means of reaching the Prairies of the West.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,)

S. J. DAWSON.

Hon. WILLIAM McDougall, C.B.,

Minister of Public Works, &c.,

Ottawa.

## REPORT ON THE LINE OF ROUTE BETWEEN LAKE SUPERIOR AND THE RED RIVER SETTLEMENT.

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## EXPLORATION OF 1868.

My report of last year contained a brief description of the country between Lake Superior and the Red River Settlement, with an estimate of the cost of opening the communication in such a manner as I believed would involve the least possible outlay; while it would, at the same time, have the effect of attracting the trade of the North-West Territories to Canada, and serve as a preliminary step to works of a more comprehensive character in the future.

I have now the honor to report on the operations of last summer, undertaken and carried on under the direction of the Department of Public Works, with the view of ascertaining whether an improvement might not be made in the eastern section of the route, by deviating from the projected Dog Lake Road and adopting the west instead of the north branch of the Kaministiquia, as the basis of a line which should embrace all the navigable water which could be rendered available.

It was known, from the reports of the Red River Expedition, that a series of large lakes existed at the source of this branch; and it appeared probable that the navigable water which they afforded might admit of being utilised as a link in the line of communication; and as their value in this respect depended, in the first place, on their level relative to each other and to the lakes on the opposite side of the water-shed, and, in the next, on the practicability of rendering them accessible from Lake Superior, the first step taken was to determine the levels and the next to look for ground practicable for a road through the broken and mountainous region which lies between them and Thunder Bay.

In describing the result of these operations, I would invite notice to the maps which are hereunto annexed for convenience of reference. These are:—

1. A plan, on a scale of two miles to one inch, exhibiting the position of the lakes at the summit of the water-shed and the deviation from the Dog Lake Road.

2. A map, on a scale of ten miles to one inch, shewing the entire route between Thunder Bay and the Red River Settlement.

3. A map, on a scale of twelve miles to one inch, shewing the relative position and length of the Canadian and United States routes to the Red River Settlement.

4. A plan, in profile, shewing the relative altitude of the lakes between Lake Superior and Fort Frances on the line of route.

5. A plan, in profile, shewing the routes by Pigeon River and Rivière la Seine.

On reference to plan No. 1, it will be seen that at the head of the Matawin, or West branch of the Kaministiquia, there are two large lakes named, respectively, Shebandowan and Kashaboiwe. These are on the eastern slope, and immediately opposite to them, on the west side is the large basin of Lac des Mille Lacs, which send its waters to Rainy Lake.

The distance between Kashaboiwe Lake and Lac des Mille Lacs is one mile and sixty chains, including an intervening lakelet or pond. This pond is distant from Lac des Mille Lacs 50 chains and on a higher level by  $14\frac{13}{100}$  feet. Between the two runs a gully, the highest point in which is 25 feet over the level of Lac des Mille Lacs and  $10\frac{87}{100}$  feet higher than the pond. This is the lowest pass existing between the waters flowing westward to Rainy Lake and those running eastward to Lake Superior. That is, between the boundary line and Nipigon Bay.

The pond just referred to is the source of the Matawin, and it sends its waters by a small rivulet, making a descent of  $4\frac{29}{100}$  feet in a distance of 9 chains, to Kashaboiwe Lake, which latter is  $9\frac{14}{100}$  feet above the level of Lac des Mille Lacs. The stream by which Kashaboiwe Lake discharges its waters is of considerable volume, and descends  $29\frac{33}{100}$  feet in its course of 70 chains to Shebandowan Lake, making the latter  $20\frac{19}{100}$  feet below the level of Lac des Mille Lacs.

Forty miles westward of the pass above referred to, that is, by way of the Baril and Windegoostegon Lakes, the water level at the head of the French Portage is 55 feet below that of Lac des Mille Lacs.

Such differences of level are not very formidable, and might in this case be easily overcome, as will be explained further on. In the meantime, I may remark, that these lakes differ so little in level as to afford the means of obtaining, at a moderate outlay, seventy miles

of unbroken navigation, through the high region which separates the two great river systems of the Winnipeg and St. Lawrence, and that not by narrow and tortuous channels, but through Lakes affording ample room for navigation.

This navigable section might be extended and rendered continuous to the westward, by means of lock and dam. Its eastern extremity would be within forty miles of the depot at Thunder Bay, with which point it can be connected by a land road for the present and a rail road in the future. The pass, as stated, is the lowest which can exist on the British side, as determined by the explorations, and yet these waters are at an elevation of 839 feet over the level of Lake Superior, or 1,479 feet higher than the surface of the sea.

It is a matter of no small importance to have such an extent of navigation in the highest part of the route to Red River, and in a region very difficult for roads.

In regard to the country intervening between these waters and Thunder Bay, it is rough and mountainous; but, with the aid of the Indians, who have their hunting grounds in that region, after a good deal of exploration, a line practicable for a road was discovered.

The different routes examined may be briefly noticed as follows:—

On the recommendation of the Indians, a line was first run from the 18th mile of the Dog Lake Road quite through to the Shebandowan Lake. This line crosses the North branch of the Kaministiquia, about two miles and a-half above the mouth of the Matawin, and from thence winds to the westward among the high table lands and mountains to the north of the latter stream. The Indians professed to have followed the best ground, and no doubt did so; but the route, although not absolutely impracticable, was found to be very rough.

Another line was then laid out from the eighth mile of the Dog Lake Road to the mouth of the Matawin, and the valley of that river itself adopted from thence to the Shebandowan Lake. It was found to be a great improvement on the first, but the route by the Kaministiquia had been recommended, and before coming to any conclusion it also was examined.

Taking as a starting point, lot 18, in the first concession of Nee-bing, a line was run to Island Portage on the Kaministiquia, with the view of continuing it on a north-west course to the valley of the Matawin. It came, however, upon very rugged and mountainous ground on the borders of the Kaministiquia, and had to be abandoned, notwithstanding that no serious difficulty was encountered in the first ten miles of its course.

In view, therefore, of all the circumstances, the line which has been adopted as the best is that already referred to as leaving the Dog Lake line at the eighth mile, striking from thence to the mouth of the Matawin and following the valley of that river to the Shebandowan Lake, or rather to the first chute below it, where it is proposed to construct a dam.

In further reference to the waters of the summit region, Shebandowan Lake on the eastern side of the water-shed and Lac des Mille Lacs on the west, are both fed by the drainage of areas sufficiently extensive to afford a supply of water for a canal, but Kashaboie Lake, which intervenes between them, is on a higher level, being  $9\frac{1}{10}$  feet over Lac des Mille Lacs and  $29\frac{3}{10}$  above Shebandowan Lake, and it is doubtful if it could afford a supply for a canal both ways.

It is quite practicable, however, to bring either Lac des Mille Lacs or Shebandowan Lake, or both of them, to the level of Kashaboie Lake, but there would be an evident advantage in raising Shebandowan Lake and making it the summit level and source of supply, as a considerable amount of lockage would thereby be saved, and the road from Lake Superior would at once strike the highest water level on the whole route. If, on the other hand, Lac des Mille Lacs were raised to the level of Kashaboie Lake and made the source of supply, there would be an ascent of 30 feet from Shebandowan Lake, which would have to be overcome by locks. It is possible, as stated, to raise both Shebandowan Lake and Lac des Mille Lacs to the level of Kashaboie Lake, and if this were done and a cut made through the dividing ridge, there would be a canal without locks extending across the summit of the water-shed.

The raising of Lac des Mille Lacs, however, would not eventually save lockage, and although the level is in its favor, as compared to Shebandowan Lake, it is doubtful if it could be more economically brought to the necessary height. On some parts of its western coast the country is low and the height and nature of the dividing ground between its waters and the streams running off from its borders, on that side, would require to be ascertained

before attempting to raise it beyond the extent of three or four feet, which, in any case, will be necessary, in order to give a sufficiency of water in the direction of Baril Lake and the French Portage, and so small a difference would be unattended with any risk of sending the water in other directions.

As regards Shebandowan Lake, the country around it is moderately high, and it receives the drainage of a considerable area on either side, so that, in all probability, its surface could be raised to the necessary level by damming its present outlet only.

It will occur, however, that Kashabowiwe Lake, which is already on the highest level, might be so arranged as to afford a supply of water for a canal both ways. It has a surface area of about eight square miles, and it receives the drainage of a considerable tract on both sides, besides which there are lakes on its tributary streams, which could be converted into reservoirs to afford a supply in periods of extreme drought. But even if the supply was so ample as to preclude all doubt as to its sufficiency, there would be nothing gained by adopting Kashabowiwe Lake, for both Lac des Mille Lacs and Shebandowan can be raised to its level at less outlay than would be involved in connecting the latter with it by means of locks.

A dam which should raise the surface level of Shebandowan Lake to the extent of 30 feet over what it is at present, would be equivalent to 30 feet of lockage and would be far less costly.

In respect to the Summit Pond, it may be regarded, to all practical purposes, as a part of Kashabowiwe Lake, for it can, at small outlay, be reduced to the same level and still have a sufficient depth of water.

The dividing ridge is, as stated, 50 chains in width and 25 feet over Lac des Mille Lacs at its highest part; through the ridge runs a gully which, apparently, is filled with boulders and fragments of rock, and it could be easily excavated to a sufficient depth.

Such, in a brief view, is the route by the Matawin or West branch of the Kaministaquia. As compared to the Dog Lake route its principal advantages are, first, that the navigable waters of the summit plateau can be reached in an unbroken line of road from Lake Superior; whereas, by the Dog Lake line the land carriage would be in two sections, one of twenty-five miles from Lake Superior to Dog Lake, and another of ten or twelve miles across the Height of Land.

In the next place, the navigation of the upper waters of Dog River and the Savanne would be tedious, on account of the narrowness and tortuosity of the channels, whereas, by the western route, once the Lakes were attained, there would be ample room for navigation; and, lastly, by adopting the Shebandowan line, a saving in distance of about twenty miles will be effected, as will at once appear on reference to the plan.

Both routes are practicable, and the Dog Lake line would be attended with the least outlay in the first instance, but would be more expensive to keep in operation, on account of the difficulties of the navigation, the additional transshipment, and the long land carriage, in such an isolated situation as the height of land on that route.

By adopting the west instead of the north branch of the Kaministaquia, there will be no change in the starting point, and as the divergence occurs beyond the point to which the work on the Dog Lake Road has, as yet, reached, the outlay so far made on that line will not be lost, and some timber prepared for a dam at Dog Lake can be floated down and used in the construction of a bridge over the Kaministaquia.

Apart from the deviation proposed in the eastern section, as above set forth, I believe the scheme suggested in my report of last year embodies the principle which should be adopted in opening the communication, as a first step towards works of a more extensive character, in the future. I would remark, however, that the information which has been obtained since that report was written, as to the traffic likely to arise, would seem to warrant additional expenditure over what was then proposed, so as to diminish the number of transshipments, and this can be done without greatly increasing the outlay. Before proceeding to details, however, I would invite attention, for a moment, to the more striking features of the country which has to be traversed.

## THE COUNTRY BETWEEN LAKE SUPERIOR AND THE RED RIVER SETTLEMENT.

Between Lake Superior and Rainy Lake, the face of the country, as a general rule, is rugged and cut up with Lakes. The summit of the water-shed or dividing ridge, is quite near Lake Superior, being forty-five miles distant at Pigeon River, and measuring in a direct north-east course to the sources of the Kaministiquia, about seventy at the bottom of Thunder Bay. The passes in the dividing region vary in height from 840 feet to 1,100 feet above the level of Lake Superior—that is by following the water courses, but the general elevation of the country is considerably higher. As may be supposed, the streams running down from such a height, in so short a distance, have a very rapid course, and, as a consequence, could only be rendered navigable at an expenditure which, whatever the future may require, is quite out of the question for the present.

Proceeding from the head of the water-shed to the westward, the descent is much more gradual, the difference of level between Lac des Mille Lacs, which is close to the summit, and the western extremity of the Lake of the Woods, being only 450 feet in a distance of 300 miles. Between the height of land and Rainy Lake, the lakes are so numerous and so large, that it would be difficult to say whether land or water predominates. The lakes, however, afford the means of making a very good water communication at a moderate outlay.

From Fort Frances, at the foot of Rainy Lake, to the north-west angle of the Lake of the Woods, the navigation is uninterrupted, save by two little rapids, easily overcome. From the Lake of the Woods westward to Fort Garry, the country is low and level, but although swampy, quite practicable for a road by a line which has been explored, and on which a good deal of work has been already done in the western section.

There is thus, between Lake Superior and the Red River Settlement, a country presenting very different characteristics in different sections. First, a rugged and broken region, extending from Lake Superior to the summit of the water-shed, in which the rivers are not navigable and the ground is difficult for roads.

Next, a country extending westward from the water-shed, still very rough and broken, but intersected in every direction by deep lakes, which occupy a very considerable portion of its area, and which, on one of the lines explored, can easily be connected so as to render the navigation through it uninterrupted.

This section ends at Fort Frances, where there is a complete and sudden change in the character of the country, and from this point the navigation becomes continuous to the north-west angle of the Lake of the Woods.

From the latter point to Fort Garry the distance is 90 miles over ground, which the explorations have proved to be practicable for a road.

The entire distance between Fort William and Fort Garry, by the route which it is proposed to open, is 441 miles, as follows:—

From Lake Superior to the navigable waters of the Summit region...	40 miles
From the terminus of the Lake Superior Road to the north-west angle of the Lake of the Woods .....	311 "
North-west angle to Fort Garry .....	90 "

441 miles.

## OPENING OF THE COMMUNICATION.

The scheme proposed has, for its ultimate object, a railroad from Lake Superior to the navigable waters of the Summit region, navigation rendered continuous, by means of lock and dam, from the terminus of the same to the north-west angle of the Lake of the Woods, and a railroad from the latter point to the Red River Settlement.

The railroad at Lake Superior would be forty miles in length, succeeding which would be navigation of three hundred and eleven miles, which latter would be connected by a railroad of ninety miles with Fort Garry.

These are works which, to carry them out completely, would occupy some years, and in the meantime, as a preliminary step, it is proposed to make a good waggon road from Lake Superior to the waters of the dividing plateau, improve the navigation from thence westward in as far as it can be rapidly done, in the first instance, and make a good waggon road from the Lake of the Woods to Fort Garry. This I conceive to be an absolutely necessary and essential step towards making the country accessible, whatever scale of improvement may be adopted in the future, and it would have the immediate effect of opening a channel by which immigration could reach the country, while it would, at the same time, draw the trade of the North-West Territories to Canada.

Before specifying in detail the various works necessary to give effect to this plan, I may notice the scheme of

#### A CONTINUOUS RAILROAD FROM LAKE SUPERIOR TO THE RED RIVER SETTLEMENT.

Such a work will, doubtless, become necessary as the regions of the North-West fill up with settlement, and it should be placed in such a position as to be available as a link in the railway system which will, no doubt, at some future day, span the continent from the Atlantic to the Pacific, within British territory.

On reference to the map, it will be seen that a railroad, to be continuous, must pass to the North of the Lake of the Woods, and it will also be observed that a line from Canada, after passing over the high plateau which is said to exist to the north of Lakes Huron and Superior, would first come upon Lake Superior at Nipigon Bay, and that its direct course from thence to Fort Garry would be by Lac Seul and the north end of the Lake of the Woods. These are facts which should always be kept in view in considering the project of a continuous railroad from Lake Superior to the Red River Settlement.

A railroad made on the line indicated would be the most direct possible, and it would at some future period, serve as a link in the extension of Canadian railways to the prairies of the Saskatchewan.

Now, a railway starting from any point West of Nipigon Bay would not meet these conditions; and all that is claimed for the comparatively short line of 40 miles which I have recommended at Fort William, is that it will serve as a connecting link between Lake Superior and the navigable waters of the interior.

In regard to the practicability of a line of railroad between Nipigon Bay and the north end of the Lake of the Woods, no decided opinion can be offered until the country is explored. It is probable that by keeping up the Valley of the Nipigon for some distance, so as to get clear of the rugged country on the immediate borders of Lake Superior, and then striking north-west to the vicinity of Lac Seul, a practicable line might be found. From Lac Seul to the north end of the Lake of the Woods, I apprehend there would be little difficulty if, as is reported, the flat silurian strata of Hudson's Bay send a spur in that direction. It might, however, be better to keep down the valley of the English River to its junction with the Winnipeg and strike direct from thence to the Red River.

In view of the importance which must soon attach to the project of a continuous railroad from Lake Superior to the Red River Settlement, I would suggest the expediency of sending an exploring party to examine the route above indicated, during the ensuing summer.

It would also be advisable to have a thorough examination made of the country to the north of Lakes Huron and Superior. A line was at one time run conforming to the line of coast, about twenty miles back, from Lake Superior, but the country over which it passed, as shewn by the very interesting report written by Mr. Herrick, who conducted the survey, is rough and broken. The line was entirely too near the coast, and I am of opinion that the best ground will be found in the high region where the waters running to Hudson's Bay and the tributaries of the St. Lawrence have their common source.

Mr. A. J. Russell, of Ottawa, in a work which will soon make its appearance, gives an epitome of all the information which has been obtained of the high plateau at the sources of the streams flowing to Lake Huron, but the country north of Lake Superior and east of Lake Nipigon is unknown, except from the reports of *voyagers*, beyond the extent of Mr. Herrick's survey, which, as stated, was confined to a limit of about twenty miles from the coast,

## ROUTE TO THE PACIFIC.

It must, in course of time, become a matter of great importance to open a line of communication completely across the continent within British territory, but whether this should be effected solely by railroads, or partly by rail and partly by taking advantage of the navigable water which is so plentifully distributed, at least to the east of the Rocky Mountains, is a question for the future.

*By Railroads.*

The country is well adapted for railroads between the Red River Settlement and the sources of the Saskatchewan and Athabasca Rivers. Practicable passes have been found, too, in the Rocky Mountains, and in these the ascent is generally easy from the east. It is only when the summit has been crossed that serious difficulties present themselves. Between the Fraser River and the forty-ninth parallel, British Columbia is one sea of mountains, but through these the persevering efforts of explorers have led to the discovery of lines said to be practicable for railroads. In regard to the passes in the Rocky Mountains, Captain Palliser, who was sent out by the Imperial Government, speaks favorably of the British Kootanie Pass, near the boundary line, where explorers from Montana are now said to be mining for silver and gold. Dr. Hector, a gentleman whose researches are of great practical value, was favorably impressed with the Kicking Horse Pass, somewhat further to the north, but probably the best of all would be the Athabasca Pass, which has been the longest used and is the best known. Mr. Waddington gives the latitude of this Pass as  $52^{\circ} 54'$  north and its height as 3,760 feet above the sea level, and describes several routes by which it may be reached from the Pacific.\* He says, also, that the upper Fraser is navigable for 280 miles of its course.

The same authority maintains that by adopting the Athabasca and *Tete Jaune* Pass, or, as it is sometimes called, the Leather Head Pass, a railroad from Edmonton House, on the Saskatchewan, to Bute Inlet on the Pacific, would only be 654 miles in length.

Until the country becomes better known, all that can be done is to indicate the probable position of an inter-oceanic railroad, and if one should ever be built, as it doubtless will, in British Territory, the following will likely be its general course.

The valley of the Ottawa, and its tributary the Montreal River, might be followed to the meridian of  $82^{\circ}$  west longitude, from thence the direction would be north-west to the outlet of Lake Nipigon, where it would join the line above suggested, for a railroad from Lake Superior to the Red River Settlement, passing by Lac Seul and the north end of the Lake of the Woods. From the Red River Settlement the ground would be very favourable to Edmonton House on the Saskatchewan, and from thence the route indicated by Mr. Waddington might be followed to the Pacific.

By this route the distance from Montreal to the Pacific, as computed by Mr. Russell, would be as follows:

Montreal to Fort Garry.....	1,367
Fort Garry to Edmonton House, over the prairies.....	825
Edmonton House to Bute Inlet.....	654
Total.....	2,846

If this line—the practicability of which has yet to be ascertained—were carried out, it might be tapped by an extension of the projected Toronto and Nipissing railroad, and it would thus be in connection with the Railway system of the Dominion at its most important points.

There is no doubt a great deal that is grand and imposing in the idea of a railroad which should span the Continent from the Atlantic to the Pacific, and grasp in its embrace the united colonies of British America—which should become an avenue for the trade of the Indies, China, and Japan, and a highway for the nations of the world.

\* The elevation of the best known passes at the sources of the Saskatchewan is as follows:—British Kootanie Pass, 5,960 feet; Kamanski Pass, 4600 feet; Vermillion Pass, 4,944 feet; Kicking Horse Pass, 5,420 feet; and Howse Pass, 6,347 feet above the level of the sea.



But, in considering schemes so vast, it is well at the same time to calculate their cost; and in drawing attention to this unavoidable phase of such projects, I cannot do better than avail myself of a calculation made by Mr. Fleming, the eminent engineer, under whose able direction the Intercolonial Railroad is now being built.

In a very interesting pamphlet, written by him some years ago on the North-West Territories, and the best means of their development, speaking of a railway of 2,000 miles in length and its accompanying telegraph line, he remarks:—

“That a just conception may be formed of the real magnitude of the project under discussion and the means necessary to its attainment, attention may for a moment be drawn to a few leading details. The construction of 2,000 miles of railway, measured by the average standard of similar works existing in this country, implies the performance of laborers’ work sufficient to give employment to 10,000 men for five or six years. It involves the delivery of 5,000,000 cross ties or sleepers and over 200,000 ton of iron rails for the permanent way. It comprises the erection of 60,000 poles, hung with 1000 tons of wire for the telegraph. It necessitates the erection of motive power equivalent to over 50,000 horses, which power would be concentrated in 400 locomotives. It involves the production of from 5,000 to 6,000 cars of all kinds, which, coupled with the locomotives, would make a single train over 30 miles in length. And lastly, it implies gross expenditure on construction and equipment of not less than \$100,000,000.

“It will likewise serve as a salutary check on hasty conclusions to weigh, beforehand, the cost of operating a truly gigantic establishment of the kind after its perfect completion; a few figures derived from actual results will shew that the first construction of a railway through British North America is even a less formidable undertaking than that of keeping it afterwards open in the present condition of the country. For operating the line successfully, the fuel alone required in each year, and estimated as wood, would considerably exceed 200,000 cords. For keeping the road in repair, a regiment of 2,000 trackmen would constantly be employed in small gangs throughout its entire length for the same purpose there; would, on an average, be annually required 600,000 new cross ties as well as nearly 30,000 tons of new or re-rolled iron rails. The annual repairs of rolling stock would not cost less than one million of dollars. Over 5,000 employes of all kinds would constantly be under pay, and as these men would usually represent each a family, there would not be far short of 20,000 souls subsisting by the operation of the road. The aggregate amount of wages in each year, after the road was in operation, would swell out to nearly \$2,000,000, while the gross expenditure for operating and maintaining works would annually exceed \$8,000,000.

“Again, if to the last sum be added the interest on first cost, it becomes evident that until the gross earnings of the railway in each year come up to the enormous sum of \$14,000,000 it could not pay interest on the capital invested.”

#### *Railway and Water Communication Combined.*

Thunder Bay, Lake Superior, is already accessible to any class of vessels which can navigate the great lakes. From thence westward to Red River the route is, as already described, forty miles of land road, succeeded by three hundred and eleven miles of navigation now broken, but susceptible of being rendered continuous, and which again, is followed by ninety miles of land road, ending at Fort Garry.

Commencing at Fort Garry, the navigation might be rendered continuous, at small outlay, by way of Lake Winnipeg and the Saskatchewan to Edmonton House, a distance of 1,060 miles. Edmonton House is within 500 miles of the Pacific Ocean, and the distance might be surmounted, according to the best information which can be obtained, by a railroad of 654 miles, or by taking advantage of the navigable waters of the Upper Fraser, and following a more tortuous route, the distance would be 841 miles, of which 309 would be by water and 532 by rail. So small an amount of navigation would not compensate for such an increase in distance, and in this instance the continuous railway would be the best.

By this route the total distance from Thunder Bay to the Pacific would be as follows:—

	MILES.	
	Land.	Water.
Thunder Bay to the inland water at Shebandowan Lake.....	40	
From terminus, Lake Superior Road, to north-west angle Lake of the Woods.....		311
North-west angle to Fort Garry.....	90	
Fort Garry to Edmonton House.....		1,060
Edmonton House to Gulf of Georgia.....	654	
	784	1,371
		784
		2,155.

It is quite practicable to make the navigation continuous from a point within 40 miles of Lake Superior to Lake Winnipeg; and if this were done, and the few impediments in the Saskatchewan removed, there would be continuous navigation from the base of the Rocky Mountains to the ocean, with one break of only 40 miles at Lake Superior, and this break might in time be overcome by lockage.

So great an extent of navigable water, or water susceptible of being made navigable running through British America, traversing the vast prairies of the west, and ending at the seaports of the Atlantic, is a feature in connection with the Western Territories, the importance of which it would be difficult to overrate.

It is well known that railroads cannot compete with water in the transport of bulky and heavy freight, and if ever a line of communication should be established across the continent in British territory, and providing it combined with the necessary amount of railway all the navigable water which could be rendered available, I believe that no other trans-continental line which can be put in operation, north of the Gulf of Mexico, would be in a position to compete with it.

Everything in this regard, however, must be the merest conjecture until the country is opened up and becomes better known. The first grand step is to open the communication between Lake Superior and the Red River Settlement in the manner in which it can be most rapidly done, to be at the same time effective; and if the barrier is thus broken through, even in a moderate way at first, many additional influences will be brought into play, and improvement urged on, until a first-class line of communication has been obtained. Before concluding this subject, I may state what is known of the Saskatchewan in regard to its capacity for navigation.

#### *The Saskatchewan.*

is not a river of such great volume as might be supposed from the immense area which it drains. It gathers its waters from a country larger than Canada, and yet it is not equal in size to the St. Lawrence. The precipitation is less in the prairies of the west than in Canada—less snow in winter and less rain in summer, but yet enough of both to make the Saskatchewan a very large river.

There is a fine harbor on Lake Winnipeg, just at the mouth of the Saskatchewan. Ascending from thence for a mile or so, the first and greatest impediment presents itself. This is called the "Grand Rapid," and here the river makes a descent of about 43 feet, rushing with great impetuosity over flat ledges of limestone rock. Between the Grand Rapid and Lac Bourbon there are several little rapids, having an aggregate fall of about 20 feet.

Lac Bourbon is distant from Lake Winnipeg about twenty miles, and from thence westward to the Rocky Mountains, or at least to a distance of eighty miles beyond Edmonton House, the navigation is reported to be uninterrupted, except at two points, where there are impediments, it is said, easily overcome.

The first is at a rapid called Tobern's Falls, about 140 miles above Lac Bourbon, where, from all that can be learned, a lock of moderate lift might be required. The next is at Coles'

Rapids, on the north branch, just above its junction with the south branch. Here a series of swift runs and little rapids, extending over a distance of eighteen miles, would require in some places to be cleared of boulders, and probably a few glance dams might be necessary.

These impediments cannot be considered serious in a navigation of eight hundred miles, otherwise uninterrupted.

### ESTIMATE OF THE COST OF PRELIMINARY LINE OF COMMUNICATION.

In estimating the cost of work in a distant region, where labour is not to be obtained regard must be had to the expense of taking men to and from the ground, and the time lost on the way, for which there is no return in labour.

In the Lake Superior Section, it would be a safe estimate to allow about twenty days for the journeys to and from the localities in Canada where labour is cheapest and workmen of the class required can be engaged. For passage, going and coming, and time on the way, each man would cost, at an average \$40, which, allowing that 250 men were employed during summer, would reach the serious item of \$10,000.

In the Lake Region, west of the height of land, a still larger allowance would have to be made.

I draw attention to these circumstances, inasmuch as my estimates for roads, more especially, may appear to be high; whereas, when the expenses above referred to, as well as the cost of transport for supplies are taken into account, they will be found to be as low as it would be safe to make them. Moreover, the experience of the section of road already partially made, although it passes over comparatively easy ground, affords a criterion as to what the cost will be in more difficult sections, and with this in view the estimate has been framed.

#### *Roads, Lake Superior Section.*

The main road which it is proposed to open through the section, as shewn on the accompanying plan, No. 1, has its starting point at the depot on Thunder Bay, from whence it strikes in a tolerably direct course to the mouth of the Matawin, following from thence the valley of that river to the first chute below Shebandowan Lake, where it is proposed to construct a dam. The extent of road remaining to be opened is 36 miles, and a Specification marked, No. 1, shewing the manner in which it is to be constructed, is hereunto annexed. Its probable average cost is set down in the accompanying estimate at \$1,800 per mile. Some further expenditure will be required, too, on the section of road already partially made, more especially at a hill near Thunder Bay, where a detour has to be made, and for this purpose I have set down \$2,000.

In my report of last year, for reasons therein stated, it was proposed to run a branch line of road from Fort William, to connect that very important point with the main road, and for this purpose a sum of \$7,000 was included in the estimate then submitted. During the past summer this branch line was very carefully surveyed. The country through which it runs is somewhat low and swampy, and two small rivers have to be bridged; but a very good line, made in conformity with Specification No. 2, can be obtained at an outlay, as above stated, of \$7,000. The length of this line would be seven miles.

#### *Pier at Thunder Bay.*

In last year's report it was proposed to sink an isolated pier in front of the depot at Thunder Bay, at which vessels could discharge their loads. It would be placed in a depth of 16 feet of water. Its dimensions would be 150 feet in length by 20 feet in breadth at top, and its cost \$2,500 00. This work may be said to be indispensable, for at present there is great difficulty, not to speak of expense, in getting articles landed at that place.

*Bridge over the Kaministiquia.*

This would be a rough but substantial structure, supported by piers of crib work, filled solidly with stone, of which there is great abundance in close proximity. The stream is 300 feet in width, shallow, and running on a bottom paved with boulders. Wood is scarce in the vicinity, the country having been swept by fire, but the timber got out for a dam at Dog Lake, can be taken down and used in the work. Its cost would be about \$4,500 00.

In the Lake Superior Section the total proposed outlay would thus stand as follows:

36 miles main road .....	\$1,800 00	\$64,800 00
7 miles Fort William branch road .....	1,000 00	7,000 00
Grading Hills, Lake Superior, and completing road partially made.....		2,000 00
Pier at Thunder Bay.....		2,500 00
Bridge over Kaministiquia.....		4,500 00
		<hr/>
		\$80,000 00

A Specification for the road and estimate of material are hereunto annexed.

*Lake Region.*

In former reports the designation "Lake Region" was applied to the section between the summit of the water-shed and Fort Frances, but Shebandowan and Kashaboiwe Lakes, immediately to the east of the water-shed, as they are on the line now proposed to be followed, may properly come under the same head.

In the estimate submitted last year will be found a statement of the sums required for each work then proposed as follows:—

Dam at French Portage.....	\$1,600 00
Dam across Sturgeon River at Island Portage.....	18,000 00
Dams at Nequaquon.....	4,000 00
Dam at Two Falls Portage on River Seine.....	20,000 00
6½ miles road and tramway, on portage between Lac des Mille Lacs and Rainy Lake.....	10,400 00
	<hr/>
	\$54,000 00

Since the estimate on which the above is founded was made, the circumstances have so far altered, that companies are already being organised for the purpose of providing the means of transport, and have it in contemplation to place steamers on such of the navigable reaches as may be of sufficient extent to render their employment profitable. It will, therefore, be a matter of importance, even at the outset, of opening the communication, to lengthen the navigable reaches where practicable, and lessen the number of trans-shipments, and with this end in view it will be advisable to extend the works in certain sections.

*Shebandowan Lake.*

At the first chute on the Matawin, two miles and a-half from Shebandowan Lake, and 16 feet under its level, there is a favourable situation for a dam, and one of small dimensions would extend the navigation of the lake to that point, and save the cost of three miles of roadway, which would otherwise have to be made over very rough and broken ground. It is, however, proposed to raise the level of Shebandowan lake to the extent of 30 feet, so as to give uninterrupted navigation to the height of land, and it would be better, at once to put up a dam of dimensions sufficient to produce this result. Before a precise estimate of the cost can be given it will be necessary to examine the ground about the lake in order to ascertain whether on raising its surface level the water might not find outlets besides the present one,

The country is so high that I believe it would not, and if this should prove to be the case \$12,000 would provide for the dam. Material for the work is in unlimited abundance. Timber can be cut on the shore of the lake, and floated off without any expense in hauling, and stone can be easily obtained either in the bed of the river, or by blasting from the high rock on the banks.

#### *The Summit Pond.*

This little lake has to be reduced in level to the extent of five feet, and the channel between it and Kashaboiwe Lake deepened so as to admit of vessels passing from one to the other. The rivulet which connects the two is 600 feet in length, and the fall in that distance 4.99 feet. The bed of the stream is of loose stone, earth, and decaying timber, without any apparent solid rock. To form a channel for such vessels as would be used, in the first instance, say 30 feet in width, the excavation would amount to 5,000 cubic yards, and the cost, always supposing no solid rock to be met with, about \$3,000 00.

#### *The Dividing Ridge.*

This ridge is 50 chains in width, and the gully, already referred to as running through it, affords an easy means of making a cut so as to connect the waters of the western with those of the eastern side. Eventually, when the communication comes to be opened on a large scale, a lock of seven feet lift will be required. At present it is proposed to place in the gully a wooden tramway at a cost of about \$2,500 00.

#### *Lac des Mille Lacs to French Portage.*

In this section last year it was proposed to raise the water of Lac des Mille Lacs by means of a dam at the two Falls Portage, and to deepen the water in the Windegoostegon Lakes by means of a dam at French Portage. It is, however, a matter of such paramount importance to avoid transshipments, in the conveyance of freight, that I believe it will be better to incur a little additional expenditure, and do away at once with the Baril and Brulé Portages. This can be effected by a dam at the outlet of Lac des Mille Lacs, which will raise the level of that lake to the extent of, say 4 feet, a cut between Lac des Mille Lacs and Baril Lake, and a dam of 55 feet in height at French Portage.

It was proposed (see report of last year) to raise the level of Lac des Mille Lacs by a dam at the Two Falls—sometimes called the Little Falls—Portage, a point on the Seine about ten miles below its outlet, where there is an excellent natural position for a work of the kind. The situation at the immediate outlet is not very favorable; nevertheless, as explained in my report of last year, I believe a dam could be constructed there to raise the water to the extent contemplated (only four feet over its present level) at less cost than at the Two Falls; and this would leave a portion of the estimate for that work to be applied to making the navigation continuous to French Portage, where it is now proposed to construct a dam, of height sufficient, to raise the water to the level of Baril Lake. In regard to the excavation necessary between Lac des Mille Lacs and Baril Lake, only an approximate estimate can be made, as the ground has not been measured with sufficient minuteness to admit of a statement in detail; but for this section, and having in view the doing away with no less than two transshipments, I would propose increasing the estimate of last year, which was \$21,600, by \$9,400, making the total \$30,000.

#### *Other Works, Lake Region.*

For the other works required in the Lake Region, I would respectfully refer to my report of last year. They may be briefly stated as follows:—

At the French and Deux-Rivières Portages, it is proposed to make good waggon roads or place tramways. They are each about two miles in length, and intervening between them is Kaogassikok Lake, 15 miles in length.

Succeeding Dieux Rivières is the Sturgeon Lake Section, which can be rendered navigable in one unbroken reach of 27 miles, by means of a dam at Island Portage. This dam, measured by the immediate effect it would produce, is the most important work in the whole region of the lakes.

Following Island Portage is a navigable reach of 17 miles, through Nequaquon Lake, ending at Nequaquon Portage, which leads to Nameukan Lake. This Portage is two miles in length, and until locks can be constructed to connect the navigation of the two lakes, it must be used and a tramway placed upon it.

Besides the Portage there are two other ways of reaching Nameukan Lake. One by the high water channel which passes off on the south side, and the other by the main channel, known as the *Rivière Maligne*, breaking off about the middle of the lake, on the north side. In these two channels there is an admirable natural arrangement for commanding the water, when locks come to be constructed in either one or the other.

From the Nequaquon Portage to Fort Frances the distance is 56 miles, and the navigation uninterrupted, except by a fall of 8.55 feet at the head of Rainy Lake, and at this point a lock should be made as soon as possible.

At Fort Frances there is another carrying place, but it is the last and its length only ten chains.

#### *Lake of the Woods Division.*

In regard to this section, I would also refer to my report of last year. The navigation is uninterrupted except by two little rapids, easily stemmed by a steamer of moderate power between Fort Frances and the north-west angle of the Lake of the Woods, a distance of 120 miles.

Lockage to the extent of only 35 feet lift, would add to this section the navigable waters of Rainy and Nameukan Lakes, giving 56 miles additional; but, to carry the scheme out a little farther lockage, amounting in all to 151 feet lift, would render the navigation uninterrupted between Dieux Rivières Portage and the north-west angle, a distance of 222 miles. This would be half the entire distance between Lake Superior and the Red River Settlement.

Mr. Russell, in his work which I have already quoted, suggests the expediency of perfecting the navigation at once to the head of Sturgeon Lake (Dieux Rivières Portage), and connecting it by a railroad of 122 miles with Lake Superior. He did not, however, know at that time that the navigation could be so easily rendered continuous, as determined by the explorations of last summer, to within 40 miles of Lake Superior; and the difference in cost of a railroad of 40 miles and of 122 miles would be several times greater than that of the lockage necessary to overcome the difference in distance.

If the navigation were rendered continuous between the Dieux Rivières Portage (head of Sturgeon Lake) and the north-west angle of the Lake of the Woods, and a lock made at the Summit Pass, the following would be the distances by land and water respectively:—

	MILES.	
	Land.	Water.
Thunder Bay to navigable water of Summit Section . . . .	40	
Terminus of road to the French Portage . . . . .	...	70
French Portage . . . . .	2	
Kaogassikok Lake . . . . .	...	15
Dieux Rivières Portage . . . . .	2	
Dieux Rivières Portage to north-west angle of Lake of Woods . . . . .		222
North-west angle to Fort Garry . . . . .	90	
	134	307
		134
Total . . . . .		441

There would thus be two trans-shipments only, between the terminus of the Thunder Bay Road and the north-west angle of the Lake of the Woods, in a distance of 311 miles, and between these two there would be an interval of 15 miles of navigable water, afforded by the Kaogassikok Lake.

Improvement to this extent might very rapidly be carried out, and there would then remain the French and the Dieux Rivières Portage, where the works would be extensive, requiring a little further time to carry them to completion.

The total amount of lockage, as will be explained further on, required to render the whole distance between the north-west angle of the Lake of the Woods and the Thunder Bay road navigable, without a break, amounts only to about 430 feet in a distance of 311 miles, or about 1.35 feet to the mile, whereas the Rideau has 457 feet of lockage in a distance of 126 miles, equal to about 3.63 feet per mile, so that, as compared to the distance, the section under consideration requires but a little over one-third part of the lockage of the Rideau Canal.

#### *Fort Garry Section.*

This embraces the country between the north-west angle of the Lake of the Woods and Fort Garry. Much fruitless exploration had been made in this section, both by the Red River settlers and parties sent out by the Government, without finding a line practicable for a road through the swamps, which cover a great portion of its area. Towards the close of the explorations, a rapid reconnoissance made by the Red River expedition party resulted in establishing a line on which the country could be crossed, and on this line, during the past winter, a good deal of work has been performed as reported on by Mr. Snow. The sum set down in the estimate of last year should be ample for a road, as regards the wooded section, but it is likely that to make a good road on the prairie an increase would be necessary, when it comes to be greatly travelled. All that can be done for a prairie road, without going to very great expense, is to drain it thoroughly and fascine it in the wet parts. Specification No. 1, hereunto annexed, should be adhered to as closely as possible in making the road through the wooded section.

To sum up the amount required for the preliminary works, now proposed, would be as follows:—

#### *Lake Superior Section.*

Thirty-six miles main road, at \$1,800 per mile.....	\$64,800 00
Seven miles, Fort William, at \$1,000 per mile.....	7,000 00
Grading Hill, Lake Superior.....	2,000 00
Pier at Thunder Bay.....	2,500 00
Bridge over Kaministiquia.....	4,500 00
	<hr/>
	\$80,800 00

#### *Lake Region.*

Dam at first chute below Shebandowan Lake.....	12,000 00
Excavation at Summit Pond, to reduce it to level of Kashaboiwe Lake, and for channel for vessels.....	3,000 00
Dividing Ridge tramway.....	2,500 00
Lac des Mille Lacs works, and thence to French Portage .....	30,000 00
Dam at Island Portage, per estimate of last year.....	18,000 00
Dams at Nequaquon .....	4,000 00
Six and a-half miles road and tramway over portages between Lac des Mille Lacs and Rainy Lake.....	10,400 00
	<hr/>
	79,900 00

*Fort Garry Section.*

Twenty-five miles eastern portion, at \$1,600 per mile...	40,000 00
Thirty-five miles middle section, at \$1,000 per mile ....	35,000 00
Thirty miles western section, over low prairie, at \$400 per mile .....	12,000 00
	<hr/>
	87,000 00
	<hr/>
	\$247,700 00

The sum required for the preliminary communication, which it is proposed to open, would thus stand at \$247,200 00, or say, in round numbers, \$250,000 00.

This may, at first sight, appear to be a small sum with which to undertake the opening of the territories of the North-West, amounting as it does to little more than the cost of eight or ten miles of railway.

These preliminary works will, nevertheless, be of a permanent and substantial character, and will form a step in the general plan. Improvement in new regions should be progressive, and in the present case, works of great extent cannot be advantageously undertaken, until the country shall have been so far opened as to admit of the introduction of material and supplies for large parties of workmen.

The region between Lake Superior and the Red River Settlement is as yet but a wilderness, utterly uninhabited except by the red men of the forest. It produces nothing to sustain human life, except game, fish, berries, and wild rice; and the birchen skiff of the natives, stitched with fibres of roots, affords the only means of locomotion.

In the heart of this wide region is a tract of navigable water which will greatly facilitate operations, but it is cut off from Lake Superior on one side by a formidable barrier of mountain and rock, and from the Red River Settlement, on the other, by a region of quagmire and swamp.

The first step taken must be to render these waters accessible from either end, and when this is accomplished the communication will be in a measure open, and any number of workmen can be employed to carry further works to completion, with all the speed which the means of the country may render advisable.

#### PROBABLE ULTIMATE COST, COMBINED RAILROADS AND CANAL BETWEEN LAKE SUPERIOR AND FORT GARRY.

During the progress of the preliminary works set forth in the foregoing, measurements can be taken on which to base detailed estimates, both for the railroads at either end of the route, and the locks necessary to connect the intermediate navigable sections. Until this is done, any estimate founded on the general measurements already made, must be taken with considerable latitude, and the safest criterion to go by, making due allowance for the difference in circumstances, will be the known cost of similar works now in operation in North America.

In respect to railroads it is easy in this way to arrive at an approximate estimate; but, as regards a canal, much will depend upon the scale of navigation to be provided for. Locks of very limited dimensions would be equal to one line of railroad, and a canal of the size of the Rideau, for example, would be equal in its capacity for the conveyance of freight to many railroads.

In the present undeveloped state of the North West Territories, it would perhaps be better to commence on a moderate scale, adopting wooden locks for which substantial structures of stone might be gradually substituted. Mr. Stevenson, in his very valuable work on American Canals, says:—

“One of the most important advantages of constructing the locks of canals in new countries, such as America, of wood, unquestionably is that, in proportion, as improvement advances and greater dimensions or other changes are required, they can be introduced at



"little cost, and without the mortification of destroying expensive and substantial works of masonry. Some of the works on the great Erie Canal are formed of stone, but had they all been of wood it would, in all probability, have been converted into a ship canal long ago."

He says further, that

"At the time when canals were introduced into America, the trade of the country was small, and did not warrant the expenditure of large sums of money in their construction; the chief object being to form a communication with as little loss of time or outlay of capital as might be consistent with a due regard to the stability and safety of the work."

These remarks are quite applicable to the present condition of the North-West Territories.

### *Canal*

The navigation, which it is proposed to open would be of that description, which is called in the United States "Slack Water Navigation." There would be but very little canal, properly so called, for the cutting would not amount to a mile in the entire distance of 311 miles.

The accompanying map, on a scale of two miles to one inch, and the plan in profile, shew the position and relative altitude of the lakes on the line of route.

Shebandowan Lake, for reasons already explained, would be adopted as the summit level; and it is, of itself, fed by the drainage of an area sufficiently extensive to ensure an ample supply of water. Between it and Lac des Mille Lacs, however, there would only be a lock of seven feet lift, and the latter lake receives the waters of an area of no less than seven hundred square miles; so that from thence westward, with Shebandowan Lake, Lac des Mille Lacs and the areas which pour their drainage into them, combined, there would be water at command, at the very source of supply, more than sufficient for a canal of any dimensions and any traffic that can arise.

By means of dams and sluices at Lac des Mille Lacs, the supply of water could very easily be regulated along the route proposed to be followed as far as Sturgeon Lake, which receives a large river from the south. Throughout the entire distance from Lac des Mille Lacs to Rainy Lake, the river channels are everywhere of rock, and the water tumbles step by step from the higher levels to the lower, so that the natural facilities for producing slack water navigation—or rather for connecting the slack water sections which already exist—are all that could be desired, and the question in the first instance to be decided would be, whether the locks should be of stone or wood?

In either case material is abundant. The hard Laurentian gneiss of the country, although somewhat difficult to work, would answer well for the rougher portions of the stone structures; and limestone, which could be made available for the portions requiring to be highly dressed, is abundant on Rainy River and at the Lake of the Woods. Timber, such as red pine, white pine and tamarack, is in unlimited quantity all along the route, and elm and a species of oak, can be had on Rainy River.

Wooden locks, in the first instance, would cost greatly less than stone structures; however small the dimensions of the latter might be; and even by adopting wood for the locks, the greater part of the work in forming a canal would be of a permanent character, and necessary for stone locks afterwards, as, for example, the dams and the excavation.

As regards dimensions, the locks, to accommodate the largest class of vessels adapted to the navigation, should be about 130 feet in length by, say, 30 in breadth, with five feet of water on the sills. In the Lake Region, vessels of a large class might be employed, but Rainy River is not adapted to a greater draught than five feet.

The locks on the Rideau Canal are 33 feet in width by 133 feet in length, with five feet of water on the sills. The Rideau has been a very expensive work, on account of the excavation, which, in length of cutting, exceeds sixteen miles, and the enormous stone dams at Jones' Falls, Hartwell's, Long Island, &c. Apart from these, and the land claims, which also added considerably to the expenditure, the cost per foot lift of the lockage has been about \$4,300. The magnificent locks at the entrance to the Canal at Ottawa, eight in number, and overcoming a fall of 82 feet, cost \$4,296 per foot lift.

Work of such a costly description would, of course, be unnecessary on inland navigation, which, in the first instance, would only be used to the extent of the capacity of the railroads at either end.

I find in looking over the statistics of some of the cheaper canals in the United States, the following approximate cost per foot lift of lockage, including dams and all expenses connected with the original construction:—

New Hampshire and Merrimac.....	\$1173 00
Delaware and Hudson.....	1827 00
Morris Canal (New Jersey).....	1930 00
Cincinnati and Dayton.....	2485 00
Philadelphia and Reading.....	4098 00

On the Morris Canal the rise and fall amounts to 1,557 feet, of which 223 feet are overcome by locks, and 1,334 feet by inclined planes, over which vessels are moved from one level to another by means of machinery driven by water-wheels.

The Erie Canal, the work on which consists in great part of excavation and embankment, affords no criterion by which to judge of the cost of lockage on such a route as that under consideration.

I have adduced the above instances to show what the cost of some of the best known canals of moderate dimensions has been. Ship canals would, of course, be vastly more expensive, and need not be considered in connection with an inland navigation west of Lake Superior.

Locks of the dimensions I have suggested, would accommodate vessels of a class sufficiently capacious to meet the wants of the country for a long period, and they would be more than equal to the capacity of a single railroad for the conveyance of freight.

From the east end of Shebandowan Lake to the north-west angle of the Lake of the Woods, the distance is 311 miles, and the total fall about 450 feet, of which 430 feet has to be provided for by lockage, the balance being accounted for in the current of Rainy River and other parts.

Supposing the locks to be of wood, I make *very ample* allowance in setting the cost at \$2,500 00 per foot lift, which should cover the excavation necessary for the lock beds, crib work approaches, dams, &c.

This would give the entire cost of the lockage at ..... \$1,290,000 00

The excavation, other than that included in the above, will not exceed 120,000 cubic yards, and reckoning the whole of this as rock, at \$1.75 per cubic yard, we have..... 210,000 00

Making the total cost..... \$1,500,000 00

Or, reckoning by distance about \$4,823 15 per mile, equal to about one-sixth part of the average cost of the cheapest railways.\*

#### *Railroads.*

Of these there will be two, one of about 40 miles between Lake Superior and Shebandowan Lake, and one of 90 miles between the north-west angle of the Lake of the Woods and Fort Garry. The former will be over very rough ground, with difficult grades, and its least average cost may be set at that of the general cost of railroads in this country, say \$40,000 per mile, making its entire probable cost of \$1,600,000 00. In regard to the line between the Lake of the Woods and Fort Garry, it will pass over very level ground, and its cost may be safely set at \$30,000 per mile, equal to \$2,700,000 for the entire distance of ninety miles. The two railways at either end of the navigation would thus involve an outlay of \$4,300,000.

\* The above is given merely to convey a general idea of the probable ultimate cost of rendering the navigation continuous between Shebandowan Lake and the north-west angle of the Lake of the Woods. The measurements to be taken during the present summer will supply material for estimates in detail.

*Total Cost.*

40 miles railroad, Lake Superior to navigable waters of interior.....	\$1,600,000 00
311 miles of continuous navigation, improved by locks and dams. ...	1,500,000 00
90 miles railroad, north-west angle Lake of the Woods to Fort Garry. ....	2,700,000 00
Total.....	\$5,800,000 00

*Cost of Transport.*

Supposing a scheme of railroad and canal, as above indicated, to be carried out between Lake Superior and the Red River Settlement, the transport of heavy freight, according to McAlpine's scale, which is generally adopted, would be nearly as follows, from Toronto to Fort Garry:—

94 miles railroad, Toronto to Collingwood, at 12½ mills a ton per mile	\$1 18
534 miles by lakes, from Collingwood to Fort William, at 2 mills per ton a mile.....	1 07
40 miles by rail, from Fort William to navigable waters of interior section, at 17 mills per ton a mile. ....	0 68
311 miles lake and river navigation, from terminus of Lake Superior railroad to north-west angle Lake of the Woods, at 4 mills per ton a mile.....	1 25
90 miles rail, north-west angle to Fort Garry, at 15 mills per ton a mile .....	1 35
1,069 miles. Total cost.....	\$5. 35

The distance from Toronto to Fort Garry, by way of Detroit, Chicago, and St. Paul, is 1,572 miles; and supposing the railway communication to be complete, the cost per ton, reckoned at 12½ mills per mile, would be \$19 65. Nothing could show more clearly the vast superiority of the Canadian line in point of natural advantages.

*RESERVES OF LAND.*

Wherever public works are likely to be required it will be necessary to reserve a certain quantity of land, not very extensive, but enough to cover the works and the approaches thereto, as, for example, at all localities where locks or dams have to be constructed.

It would be well, also, to reserve an ample area at every point where villages or cities were likely to arise, so as to prevent the land from falling into the hands of individuals who are always ready to purchase in such situations for purposes of speculation.

Between Lake Superior and Red River Settlement, the localities which strike me as being the most likely to become the sites of villages are Fort Frances, on Rainy River, the north-west angle of the Lake of the Woods, and Oak Point Settlement.

*Fort Frances.*

This point is at the outlet of a spacious lake, into which several rivers of great volume discharge themselves, after draining an area in which timber fit for commercial purposes is very abundant.

The falls just in front of the fort present unlimited water power, which is all the more valuable from the fact that there is none to compete with it within a distance of 150 miles, on the course of the river to the westward. Fort Frances is, moreover, at the commencement of a

fine tract of land, which extends along the winding course of the Rainy River to the Lake of the Woods, and which being on the high road to the west, will rapidly fill up with settlement.\*

It is likely also to become the centre of a mining district. Schists of Silurian age, traversed by lodes of quartz, are plentifully distributed at Rainy Lake, and gold has been already reported.

Already, too, gold mines are being worked at Vermillion Lake, which is on the United States side, but sends its waters to Rainy Lake.

With a vast district covered with groves of pine timber to the east, a large tract of the finest conceivable land to the west, and a region likely to prove rich in minerals in close proximity, Fort Frances must soon become a place of importance. Land should, in consequence be reserved, not only for the public works necessary to surmount the falls, but also for the site of a town.

#### *North-west angle of the Lake of the Woods.*

This point has nothing very attractive about it, further than that being at the terminus of the navigation, and the commencement of the land roads, it must become a place of considerable resort, and, therefore, a town plot should be laid off, and the lots sold or granted free, under condition of building and permanent residence.

#### *Oak Point Settlement.*

It would seem as if people sometimes gathered by instinct, to points which were destined to become of importance from causes of which they could have had no conception, and Oak Point Settlement is one of these. The first settlers could have had no idea that a line from the dreary swamps which lay between them and the Lake of the Woods, and of which they knew nothing, would emerge at that point. A few explorers attached to the Red River Expedition, following the best ground from the north-west angle, came upon the settlement, and as the track they laid out is to be a highway, there is every indication that it will become a place of importance. Forty families have already established themselves, and a church has sprung up in their midst.

The land is of unsurpassed fertility, and being where the prairies and forest meet, it has the advantages of a wooded and cleared country combined. Wood for fuel, building, and fencing, on one side, and fields, for hay and pasture, bounded only by the dim horizon, on the other. A town plot should be laid off, and not a lot granted except to an actual settler.

#### *Fort Garry,*

Situated as it is on navigable waters, which have their sweep across half a continent, and with land of unequalled fertility surrounding it in every direction, must become a very important place. It is a point at which water-lines, railroads, and telegraphs will converge. Hundreds of miles away to the south; the valley in which it stands blends imperceptibly with that of the Mississippi, affording easy means of communication. In the opposite direction are vast tracts of navigable water, which afford ready access to the McKenzie River, and the fur producing regions of the north. To the west, the broad Saskatchewan gives a route to the Rocky Mountains, with the gold fields of British Columbia just beyond, and to the east, lies the projected road to Canada, which will yet bring its stream of traffic and immigration to the prairies of the west.

Nearly sixty years have passed since Lord Selkirk planted his little colony of Scotch Highlanders at Fort Garry, and even then he must have seen the advantages of the situation in which he placed his countrymen, and the future which awaited their descendants, who are now among the lords of the soil, and must continue to grow in wealth as the country increases in prosperity.

\* This is the country of which Sir George Simpson wrote as follows:—"Nor are the banks less favorable to agriculture than the waters themselves to navigation, resembling in some measure those of the Thames near Richmond, &c.," and proceeds—"Is it too much for the eye of philanthropy to discern through the vista of futurity, this noble stream, connecting as it does the fertile shores of two spacious lakes, with crowded steamboats on its bosom, and populous towns on its borders?"

The lands at Fort Garry are in private hands, so that no reserves can be made; but, as a general rule, town plots should be laid off and reserved wherever there is any likelihood of villages arising, and in such situations lots should be sold, or granted free only to actual settlers.

### THE INDIANS ON THE LINE OF ROUTE.

In my report of last year, printed by order of the House of Commons, I referred to the Indians inhabiting the country about Rainy River and the Lake of the Woods, as being the only tribe with which the country would come in contact, in opening the communication between Lake Superior and the Red River Settlement.

These Indians occupy a peculiar and somewhat exceptional position. They are a community by themselves, and are essentially wood Indians, although going on hunting or fighting expeditions to the prairies. They are of the same tribe as the Indians at Red River, speak the same language, and regard them as their kindred; but they seldom see them, and have but little intercourse with them.

Although the principal line of traffic at one time passed through their territory, they have for half a century had but little intercourse with the white man. Missionaries have made no impression upon them; and in many respects they have shewn themselves to be less amenable to the influences of civilization than Indians usually are. They, in fact, take pride in maintaining their distinctive Indian character, are deeply imbued with traditions of what they believe to be an honorable past history, and would look with disdain on any of the community becoming Christian.

They have a sort of government, consider themselves great *braves*, and occasionally send war parties to fight the Sioux on the plains. The international boundary line passes through their territory, and some of them live on the United States side and some on the British. The permanent residents, however, are almost entirely on the British side; those from the United States making their appearance in considerable numbers only in summer during the fishing season. The country on either side is in a state of nature, wild and unsettled.

They are sufficiently organized, numerous and warlike, to be dangerous if disposed to hostility; and standing as they do in the gateway to the territories of the North-West, it is of the highest importance to cultivate amicable relations with them.

One of the first necessary steps to be taken will be to arrive at a distinct understanding as to right of way, and have the same embodied in a formal treaty. This treaty, if confined solely to that one point—right of way—as it should be, without reference to lands for settlement, and other questions which could be arranged after the communication was opened, would occasion no further outlay than would be involved in a few presents of blankets and such articles as they require, which an officer sent for the purpose might judiciously distribute, with the aid of the agents of the Hudson's Bay Company.

On the opening of the communication last year the chiefs of the tribe sent one of their number, attended by a party of his followers to Fort William, to ascertain what was being done, and to learn the intentions of the Government in regard to opening the communication. No information on the subject of his enquires could at that time be given to him; but the fact of the tribe having sent such a messenger, and for such a purpose, shews the deep interest which they take in the present movement. They would be keenly alive to any imagined slight in opening a highway, without regard to them, through a territory of which they believe themselves to be sole lords and masters, and to which, if a lengthened period of occupation can be given a claim, they have unquestionably some title.

As stated in my report of last year, working parties must be kept as much as possible aloof from the Indians, and the officers in charge should always see that they are treated with proper respect. They are very different from the timid and cringing creatures who are now the sole representatives of the Indian race in the back settlements of Canada, and the bearing I have sometimes seen adopted towards the latter would not be relished.

Never having come in contact with what they believe to be a superior race they are conscious of no inferiority; but while this is manifest in their bearing, they are at the same time inoffensive and obliging.

The maintenance of order and amicable relations will be much facilitated by the utter and complete exclusion of intoxicating liquors. The penalty for the introduction of such on the American side is the States prison. Pity that we have not so salutary a law on the British side.

For further notice of these Indians, see last year's report, page 26.

### MANNER OF PROGRESSING WITH THE WORK.

As explained in my report of last year, the preliminary works proposed are of that nature which can be better performed by engaging good workmen and competent overseers, than by contract.

As many men as could be advantageously employed, should be at once placed on the land roads at either end of the route, so as to render the navigable waters of the interior sections accessible as speedily as possible.

The Lake Superior Road can easily be supplied with workmen and material from Canada.

For the road between the north-west angle of the Lake of the Woods and Fort Garry, workmen can readily be engaged in the Red River Settlement, but the dearth now prevailing at that place, and which must continue to prevail until harvest, would render it necessary, in the early part of the season, to procure supplies in the northern settlements of Minnesota.

In regard to the Lake Region, timber can be prepared for the dams, and floated during summer, to the respective positions where it is required, and the work of excavation and construction could in several instances go on immediately, and be continued during winter, when supplies can be sent in more cheaply by sleighs than with canoes in summer.

When the road between Thunder Bay and Shebandowan Lake is completed, there will be no difficulty in conveying supplies to the works in the interior, and this is one of the reasons why it should be pushed through as rapidly as possible. Operations in such distant localities as Namenkan and Nequaquon, would be expensive and cannot well be undertaken until this road is completed.

### SCHEME OF A RAILROAD TO RAINY LAKE.

In one of my preliminary reports, printed soon after the explorations had commenced in the North-West Territories, occurs the following passage:—

"When the circumstances of the country would admit of the outlay, a continuous rail-road—195 miles in length—might be made between Lake Superior and Rainy Lake, and another of 91½ miles between Lac Plat and Fort Garry. If this were done, and two locks constructed at Fort Frances, the Red River Settlement would be within less than two days' journey of Lake Superior, &c." (Journal Reports of 1860, N.-W. Territories, page 29.)

Since the report containing the above was written, there has been much additional exploration, and the result has been to shew that a railroad of 40 miles between Thunder Bay and the navigable waters of the interior section, combined with the lockage suggested, would be of greater advantage and vastly more economical, both in construction in the first instance, and in working it afterwards, than a continuous line to Rainy Lake. The latter, although the distance, in an air line, is only one hundred and seventy miles, allowing for necessary curvature, in such a region, would run up to about two hundred miles, and there are certain very important conditions which it would not meet.

It could not be extended at a future period to the Red River Settlement, except through United States Territory, on account of the Lake of the Woods, which spreads its waters for

a hundred miles directly across its course; and it could form no part of a line from Canada to Fort Garry, as it would be over sixty miles distant from such a line at its starting point on Lake Superior, and about a hundred at its terminus on Rainy Lake.

It would only be a "Portage Railroad" available during the season of navigation, for connecting one tract of navigable waters with another. In this respect it would, no doubt, be highly useful, but the same object can be effected, in this case, by the shorter line of 40 miles now suggested, combined as it would be, with the lockage necessary to render the navigation continuous between its terminus and the north-west angle of the Lake of the Woods.

The idea of a continuous line to Rainy Lake, was merely thrown out as a suggestion in a preliminary report, in which was discussed the various ways of reaching the Red River Settlement and their advantages, as compared to the longer route through the United States. It has, however, had a great deal of importance attached to it, and been adopted by many warm advocates of opening communication with the North-West Territories; and I trust they will perceive that I am not now arguing so much against their views as explaining why a suggestion made by myself, before the explorations had proceeded far, might now be improved upon, by extending the navigable section and adopting a greatly shorter and less expensive railroad. The principle in both cases is the same—a railroad from Thunder Bay to the navigable waters of the interior—only that, as now proposed, the navigation would be extended to within a shorter distance of Lake Superior.

#### FURTHER SURVEYS AND EXPLORATIONS,

##### *Between Nipigon Bay and Fort Garry.*

As already explained, in projecting a line of railroad from Lake Superior to the Red River Settlement, Nipigon Bay should be adopted as the starting point. Running from thence in the most direct course possible, the line would come upon Lac Seul—a large sheet of water tributary to the Winnipeg. From thence it is likely that practicable ground would be found by keeping in a course nearly direct to the north end of the Lake of the Woods. From the latter point to Fort Garry the country is better known, and no great difficulty need be apprehended, except in the vicinity of Rat Portage, where a considerable area is occupied by low rocky hills. Should the ground prove to be of a very difficult character between Lac Seul and the North end of the Lake of the Woods, it is probable that a better line might be found by following the valley of the English River—the discharge of Lac Seul—to the Winnipeg, crossing the latter above the confluence of the two, and continuing along its valley to the Seven Portages, from which point a line could be carried to the Red River Settlement in a distance of about forty miles, over a level but somewhat swampy country. By adopting the valley of the English River the distance would not be greatly lengthened, and according to the most reliable accounts a fair country would be thrown open for settlement. Fine crops are raised at the Hudson's Bay Company farm at Lac Seul, and, as limestone underlies a portion of the country, it is reasonable to suppose that where it prevails, the soil, as is generally the case, must be good, and the ground at the same time favorable for railways.

The principal difficulties will doubtless be found in this case as elsewhere, with lines starting from Lake Superior, in getting to the waters of the western slope.

A survey should be made of the entire route, and in carrying it out, the levels along the water courses should be determined by actual measurement with the spirit level, and the elevation of the adjoining country ascertained, approximately, by the barometer.

The region is intersected by rivers and lakes navigable to birch canoes, so that no great time need be occupied in making a cursory survey, such as would be necessary to ascertain the general character of the country.

This survey might be combined with operations at Fort William, so that no separate organization would be required.

##### *Between Thunder Bay and Rainy Lake.*

Measurements require to be taken, on which to base estimates for the work to render the navigation continuous between Shebandowan Lake and Fort Frances; and in view of the

importance which must now attach to the country on the line of route, cursory surveys should be made of all the lakes and tributary streams for a considerable distance on either side thereof. These surveys might, without greatly increasing the outlay, be carried on in connection with the work on the projected roads and dams already reported on.

#### MR. RUSSELL'S WORK ON THE NORTH-WEST TERRITORIES.

In concluding this report, I feel it incumbent upon me, in the interest of public information, on the subject of the North-West Territories, to draw attention to a work by A. J. Russell, Esq., of this city, about to issue from the press of Geo. E. Desbarats, Esq., an advance copy of which I have had the privilege of perusing. A lack of proper knowledge of these immense regions, so widely different in their climatic influences—though heretofore so generally referred to under the somewhat chilly name of *Hudson's Bay*, to which vast territories, thus classed, bear not the slightest affinity—and the utter want of any available means of acquiring such knowledge, has heretofore precluded the possibility of any general practical discussion of the results to be attained by the development of the country. The information about to be laid before the public in Mr. Russell's work will, therefore, be of the very greatest importance, drawing, as it does, from every source that patient investigation could render available such stores of knowledge as have yet accumulated; and presenting the whole, illustrated by maps, shewing the fertile and the barren, the genial clime which invites millions of settlers to till the virgin soil, and the hyperborean regions where the hunter and the fur trader will still have unmolested sway, in a manner that will enable every one to judge for himself of the future that awaits the Dominion that now presents so vast a field for enterprise and progress. Mr. Russell's work is deserving of a more extended notice than comes within the scope of this report.

#### THE GREAT NORTH-WEST.

Although it may seem to be stepping aside a little from the direct matter of this report—properly confined to the subject of opening the communication—yet, inasmuch as I have, heretofore, under the orders of the Government, visited the great region farther to the west, to which the opening of this first link is but the unbarring of the gateway, I cannot close without congratulating the country and the honorable gentlemen themselves, on the success achieved by the deputation in settling a question that lays open to the enterprise of the Dominion, a region which forms no inconsiderable portion of the American Continent, and which is probably unsurpassed in the variety and extent of its natural resources, by any other area of equal dimensions on the earth's surface.

To those who believe that the north-west country, including the Red River and Saskatchewan valleys, was properly a part of Canada, when they consider the formidable array which stood in the way of establishing our rights, and the vastness of the stake, the sum to be paid will appear insignificant; and when, in addition to all that could have been fairly claimed, we acquire an immense territory, rich in the products of the chase, in fisheries, and probably in mines, to which the right of the Hudson's Bay Company was not even in dispute, and extinguish thereby the last vestige of a sway which, however mildly exercised, is not conformable to constitutional usage, over any part of British North America, a result has been accomplished of which the country at large and the delegates themselves may justly feel proud.

There is but one point in the transaction to which some seem disposed to take exception, and that is the appropriation to the company of a small proportion of the land within the district known as the Fertile Belt, and which is not the only fertile belt in the wide regions of the north west. I would scarcely feel justified in touching on this subject did I not believe, from long personal intercourse with the resident members of the company, that the arrangement will work well and conduce to the general advantage.



No one will dispute the wisdom and ability with which the Hudson's Bay Company have conducted their affairs, and if in the past they have sought to exclude settlement, as opposed to their interests, is it not reasonable to believe that the same ability will now be directed to its promotion, both because they will have other dealings with Canada, which will make it their interest to act in concert with her, and because their lands in the fertile belt will thereby increase in value?

Assuming this as the natural result, I can speak of the resident partners and officers of the company as having it in their power to render the most important services, both in aid of settlement and in the control of the Indian element. They are wedded to the soil; they know every part of the country, and under the new *regimé* they will feel that their interests are identical with its progress. Moreover, the influence of the partners in England—many of whom are in positions which will render their aid of the greatest importance in directing emigration to the prairies of the west—will probably be of more avail than any other effort likely to be made in the same direction.

To conclude, there is a beautiful and fertile land of vast proportions, inviting the husbandman to its virgin soil. If we, in turn, invite and interest all influences in the Dominion, the Hudson's Bay Company included, to unite in its development and in directing emigration and settlement to it, the day is not distant when a teeming population of millions will find there the means of prosperity and plenty; and it would be a fitting sequel to the work now being accomplished if, within a few short years from this date—which is quite possible—the delegates of last winter, Sir George E. Cartier, Bart., and Hon. Wm. McDougall, C.B., with the best appliances of modern travel, could visit the fertile belt, and see its broad navigable rivers, cutting through great coal fields near their sources, to wind for many hundreds of miles through grassy prairies of unsurpassed fertility: or, passing from this fertile belt, to view still another belt as vast—farther to the north, but farther also to the west, and under the climatic influence of a lower level—where another navigable river, the great Unjiga, taking its rise in the plains of British Columbia, cuts through the Rocky Mountains, in its course of a thousand miles, and winds eastward through woodland and prairie across ten degrees of longitude. This is the region which so impressed Sir Alexander McKenzie, the first civilized man who had ever beheld it. Early in May he saw the country green with exuberant verdure, its gently undulating hills and valleys covered, far as the eye could reach, with vast herds of buffalo and elk, with their young frisking about them. He speaks of its soft and beautiful scenery, its trees in full blossom, and indeed, to judge from his account, as well as from the narratives of other travellers, it would seem as if this remote country of the Unjiga with its winding streams, its clumps of trees, and beautiful green sward, and its herds of untamed cattle, rivals, if it does not surpass, in many places, all the groves, lawns, and plantations with which genius and art seek to adorn the habitations of civilized life.

Respectfully submitted,

S. J. DAWSON.

(No. 7,409.)

FORT WILLIAM, LAKE SUPERIOR,

10th July, 1869.

SIR,—In order that funds may be provided in due time to meet the requirements of the operations now being carried on in the Lake Superior Section of the Red River Road, I would respectfully inform you that on the scale now commenced, the expenditure will be nearly as follows:—

For July.....	\$17,000 00
„ August.....	10,000 00
„ September.....	10,000 00
„ October.....	10,000 00
„ November.....	13,000 00
	<hr/>
	\$60,000 00

The estimate for July includes accounts already sent in for supplies and materials.

We have now on hand provisions for fifty days, and in a region so distant and connected with any source of supply by only two steamers, it is always necessary to keep a few weeks supply on hand.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,)

S. J. DAWSON.

P.S.—In addressing letters to this place, please put on—Fort William, *Lake Superior*, as otherwise they sometimes go to Fort William, on Ottawa.

S. J. D.

F. BRAUN, Esq.;

Secretary of Department of Public Works,  
Ottawa.

(No. 4,912.)

OTTAWA, July 14th, 1869.

SIR,—I herewith forward you Bonds Nos. 3,224 and 3,225, on the part of John A. Snow and Simon J. Dawson, respectively, for the due performance of their duties as superintendents and paymasters on the Red River Road, to be deposited and registered in your Department, as required by the Act.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN.

The Hon. the Minister of Finance, Ottawa.

(No. 7,513.)

FORT WILLIAM, LAKE SUPERIOR,

21st July, 1869.

SIR,—I have the honor to inform you that I have now over two hundred men at work on this section of the Red River Road. The organization of the working parties has been completed, and oxen and men provided for the journey, proposed by the Minister of Public Works to the interior.

In order that we may be supplied with provisions and material, and in order, also, that payments may be regularly made to the workmen's families, I find that it will be necessary to maintain an officer in Toronto.

I, therefore, send down Mr. Franklin McDougall, who will, in the first place, proceed to Ottawa to confer with the Department in regard to certain matters of which I have given him a memorandum, and then return to Toronto, where he will have the duty above indicated to attend to.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

S. J. DAWSON.

F. BRAUN, Esq., Secretary,

Department of Public Works,  
Ottawa.

(No. 7,514.)

FORT WILLIAM, LAKE SUPERIOR,

21st July, 1869.

SIR,—In my letter of the 10th instant, I had the honor to submit an estimate of the sum,

which would be required monthly during the summer, for the works on this section of route to Red River, viz.:—

For July .....	\$17,000 00
„ August .....	10,000 00
„ September .....	10,000 00
„ October .....	10,000 00
„ November .....	13,000 00
	<u>\$60,000 00</u>

The amount applied for so far, is as follows:—  
1869.

June 14th, Draft at 1 month on Minister of Public Works .....	\$ 900 00
„ 24th, Draft at 10 days on Minister of Public Works .....	3,500 00
„ 28th, Requisition for warrant, W. & R. Griffith, to meet their account .....	1,673 39
„ 30th, requisition for warrant, favor S. J. Dawson .....	4,000 00
July 9th, Requisition for warrant, favor Milloy & Co., for account freight Steamer Chicara .....	1,419 35
„ 10th, Requisition for warrant, favor W. & R. Griffith, for supplies furnished as per account transmitted .....	4,492 35
	<u>\$15,976 09</u>

We have now a large party of men at a distance from any source of supply. The workmen's families living in various parts of Canada have to be provided with the means of subsistence; and anything arising to affect our credit and stop supplies might be attended with consequences the most serious as regards the progress of the work.

The usual promptitude of the Department in attending to a requisition for means, gives no cause for apprehension on this head; and I merely mention the subject, as a mistake seems to have occurred in regard to the requisition of 30th ultimo for \$4,000, referred to in your telegraph of the 5th instant, which, up to the 16th instant, had not passed to my credit in the Bank of Montreal.

Mr. Franklin McDougall, whom I send down, will explain particulars.

I have the honor to be, Sir,

Your most obedient Servant,

S. J. DAWSON.

F. BRAUN, Esq., Secretary,  
Department of Public Works,  
Ottawa.

(No. 7,609.)

FORT WILLIAM, LAKE SUPERIOR,

31st July, 1869.

SIR,—I beg to send herewith a plan of survey by Provincial Land Surveyor, Austin, showing the ground marked off for purposes connected with the Red River roads, and would respectfully suggest the expediency of at once purchasing or leasing the same from the Government of Ontario.

The ground in question embraces the point selected for wharves, and the store-houses and buildings now erected thereon are of considerable value.

The space marked off is small in extent, under seven acres. It is a portion of a lot occupied, and partially cleared some years ago, by the Rescue Company, but it was never patented, and is still in the hands of the Government of Ontario.

Apart from the value it has acquired from the public works and buildings, and being selected as the point of departure for the road to Red River, it is intrinsically of no more value than any other area of equal extent on the shores of Thunder Bay.

A description of the property to accompany the map is enclosed, and it is now of importance that a title of some kind, either by-purchase or lease, should be acquired as speedily as convenient from the Government of Ottawa.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,) S. J. DAWSON.

F. BRAUN, Esq.,

Secretary, Department of Public Works,  
Ottawa.

*Descriptions of the tracts or parcels of land required for public purposes in connection with the Red River Roads.*

**BLOCK A.**—Commencing at northerly side of the Government road, at the water mark of the water of Thunder Bay (point A on plan); thence along the said north side of said Government road, on a magnetic course, bearing north-seventy-four degrees west (N. 74° W.) eight chains to the point B, where a stone monument and a squared post were planted; thence north sixteen degrees east, eight chains, where a stone monument and squared post were planted at point C; thence south seventy-four degrees east, nine chains to the water's edge of Thunder Bay (point D); a stone monument and squared post were planted, nineteen links back on this last mentioned line; thence from the point D, following the water line of the Bay, towards the south-west, to place of beginning, containing said tract six acres three roods and eight perches (6a. 3r. 8p.) in superficies, and upon which are erected three wooden buildings.

**BLOCK B.**—An irregular tract or piece of land of triangular shape, designated on the plan under the letters A, E, F, bounded in front by the waters of Thunder Bay, and lying between the present travelled road and the said water, terminating in a point at the north-east angle of the wharf, containing sixteen perches (16p.) or thereabouts, in superficies.

**BLOCK C.**—An irregular piece of ground, lying on the south side of the Government road at Thunder Bay, commencing at the north-western angle of the wharf (point G), where an iron bolt has been driven into the rock; thence north thirty-eight degrees and thirty minutes west, two chains and twenty-two links to H, where a stone monument and squared post were planted; thence north sixteen degrees east, fifty-five links to the south side of the Government road (point J); thence following the south-westerly side of said road to place of beginning; containing nineteen perches (19p.), or thereabouts, in superficies, upon which is erected a wooden building.

The said tracts or blocks (A, B, C) surveyed and bounded, contain an area of seven acres and three perches (7a. 0r. 3p.)

GEORGE F. AUSTIN,  
Provincial Land Surveyor.

Thunder Bay, 24th July, 1869

(No. 5,294.)

OTTAWA, September 4th, 1869.

SIR,—The Hon. the Minister of Public Works deems it advisable to furnish you with somewhat more definite instructions than you have yet received in respect to the conduct of the operations now under your charge at Thunder Bay, more particularly in regard to the payment of wages, disbursements, &c. As you are probably aware, it has been the practice of the Department hitherto, in the execution of important public works, to have the pay-lists and

accounts certified and approved of by an Engineer or officer in charge of the works, and the payments made by a paymaster. In the case of the works going on under your direction this rule has been departed from, and in order to bring them under the same regulations the Minister has directed me to inform you, that pending the appointment of a paymaster to the force you are superintending, he has instructed Captain Pryce (one of the gentlemen you have engaged) to act as your accountant and bookkeeper, and to be present and testify as a witness, on the face of all pay lists and vouchers dealt with by you, to his knowledge of the payments having been made; and the Minister desires that Captain Pryce shall prepare and transmit to the Department at the close of every month, statements, duly certified by yourself, made out on the forms in use by the Department (a packet of which is enclosed), shewing all moneys received and disbursements made by you on account of the works, the same to be accompanied by vouchers in duplicate. This in addition to the general statement furnished at the close of the season.

The Minister further directs that you report to the Department fortnightly, giving the number of men employed, the length of road completed, and other interesting information in relation to the progress of the works, &c. The Minister wishes me to state, lastly, that you are not to make any serious change in the mode of managing the works, and not to increase materially the number of men employed, without consulting the Department. Be pleased to own receipt of this communication.

I have the honor to be, Sir,

Your obedient servant,  
(Signed,)

T. TRUDEAU,  
Deputy of Minister P. W.

S. J. DAWSON, Esq.,  
Superintendent Government Works,  
Fort William, Lake Superior.

(No. 8,050.)

FORT WILLIAM, LAKE SUPERIOR,  
12th September, 1869.

SIR,—The initiation and progress of the works, as well as surveys in the interior, between the terminus of the Thunder Bay Road and Fort Frances, would be greatly facilitated next year by sending, during the ensuing winter, to Shebandowan Lake a limited quantity of provisions.

I would propose storing at that place about eighty barrels of pork and about one hundred barrels of flour.

Whatever arrangements might be made for the prosecution of the works in the interior, the provisions would always be available, and would render it possible to commence extended operations in the Lake Region immediately on the opening of the navigation, which otherwise, it would be expensive to do until the Thunder Bay road is completed.

Should the suggestion meet with the approval of the Department, I would order from Toronto the supplies indicated, and provide for their being sent forward by sleighs during the coming winter.

I have the honor to be, Sir,

Your most obedient servant,

S. J. DAWSON

F. BRAUN, Esq.,  
Secretary, Department Public Works,  
Ottawa

(No. 5,400.)

OTTAWA, September 22nd, 1869.

SIR,—In reply to your letter of the 12th instant, I am directed to state that as it is probable the works in the interior, beyond the terminus of the road now in progress, will be done by contract, no more provisions than will be needed for the completion of the road to Shebandowan should be sent forward; a few barrels extra of flour and pork for the engineers might be added.

I have the honor to be, Sir,  
Your obedient servant,  
(Signed,)

F. BRAUN,  
*Secretary.*

S. J. DAWSON, Esq.,  
Superintendent of Government Roads,  
Fort William, Lake Superior.

(No. 8,271.)

FORT WILLIAM, LAKE SUPERIOR,  
5th October, 1869.

SIR,—As the steamers make their last trip for the season at the end of the present month, I propose discharging at that time all the force now employed in the Lake Superior Section of the Red River Roads, except such of the party as are required for the construction of bridges and the getting out of timber for the wharf at Thunder Bay.

These operations can be accomplished in winter, and for the purpose of carrying them out sixty men will be retained.

To meet the wages due to those who are to be discharged, I beg that a further sum of four thousand dollars (\$4,000) may be placed at my disposal.

I have the honor to be, Sir,  
Your most obedient servant,  
(Signed,)

S. J. DAWSON.

F. BRAUN, Esq.,  
Secretary, Department of Public Works,  
Ottawa.

(No. 8,277.)

FORT WILLIAM, LAKE SUPERIOR,  
24th September, 1869.

SIR,—I beg to inform you that, as directed by your letter of the 4th instant, I communicated to Captain Pryce the instructions therein contained, in regard to the system in which the accounts are to be kept, and he is now engaged in arranging them according to the form prescribed.

As regards the payment of wages, disbursements, &c., I have in effect been following the course you have pointed out. All considerable payments, apart from the accounts sent the Department, and paid by Warrant, have been made through Mr. McDougall or Capt. Pryce. The latter has, in fact, been acting as paymaster at this place, and it is through him that payments are made to the workmen, and remittances sent to their families, as well as to all parties here or at a distance from whom purchases are made or to whom payments may be in any way due. Your instructions in this respect shall be strictly adhered to.

In regard to the works, we have been making fair progress, notwithstanding that the weather has been very unpropitious. The rains which prevailed in this section from the middle of August to the middle of the present month had the effect of flooding the streams and

swamps to an extent which the Indians declare to have been absolutely without precedent in any previous summer within their recollection. Last week the water in the Kaministiquia and Matawin, notwithstanding that these rivers flow from large lake basins, was fully up to the average height of a spring flood. The ground in hill and valley became saturated and the swamps were in some cases converted into lakes. Lake Superior itself, which in ordinary seasons is not sensibly affected by summer rains, rose two feet, and is still rising. While the rains continued the workmen, having only the shelter of thin tents, were much exposed. They, however, worked on without a murmur, and an occasional call for an additional blanket or an oil cloth was all that occurred to indicate the existence of the slightest discomfort. This shews the advantage of taking to a wild region such a class of men who have been accustomed to the wilderness and the exposure of the *Voyageur's* life.

During the present week the weather has much improved, the ground is fast drying, and the progress has been correspondingly rapid.

A brief statement of the manner of proceeding with the work will no doubt be of interest to the Department. It differs little from the ordinary course pursued in opening roads in a new region, except in so far that all the different operations are being simultaneously carried on.

In advance of the workmen is a party of surveyors, accompanied by such of the native Indians as are best acquainted with the locality. These explore the country along the line of route and are careful to select the best ground. They have followed, as a base, the line projected last summer, and in rocky and swampy sections have improved upon it by making slight deviations. The surveyors are now near Shebaudowan Lake, and in a short time will have completed their work. Following in the track laid out by the surveyor is an assistant engineer and a party of five men, who finally "locate" the road and cut a track as they proceed over which oxen can pass with a sled. This ox road has been of great advantage in affording the means of supplying the different gangs of workmen with provisions and materials.

The working parties are placed in gangs, at convenient intervals apart, over a distance of three miles or thereabout. These gangs are divided into two parties, numbering from fifteen to twenty-five men each. One of these parties grubbs and clears the line, the other follows, ditching and rounding up the roadway. Where the woods are very dense and heavy, the proportion of grubbers has to be increased. From the eleventh to the seventeenth mile, birch trees of large dimensions were in many cases the prevailing growth, and the roots of these, tangled and matted as they were among stones, occasioned great labor in getting clear of them.

Bringing up the rear is a small party with all the horses and carts at disposal, grading sections where the carriage of earth or gravel would be too far for the wheelbarrow.

Besides the road-makers, a party of twenty men, is stationed at the bridge site on the Kaministiquia. They have prepared a considerable quantity of timber for the structure which is to cross that river, and have just completed a bridge across Strawberry River, about a mile and a half east of the point at which they are encamped.

At the depot at Thunder Bay, a commodious store-house, 50 by 28 feet, has been completed. A stable 50 by 18 feet, capable of accommodating the horses and oxen at present on the line, is nearly finished; and near it a hay-house, already filled with an ample store of the material it was designed to hold, has been erected.

A small log building, put up two years ago by the colonization road party, who were then here, has been completed roughly, and is now used as an office. These, with a small blacksmith's shop and two board sheds, constitute the buildings at the depots. There is as yet no dwelling house, nor is it intended to erect one for the present, such of the party as are here being accommodated in tents.

Besides the men employed on the works, a number of Iroquois and other Indians were engaged, with a view to their employment on the surveys in the interior, and keeping up communication with the Red River Settlement.

Soon after our arrival a party selected from among them was sent, under the guidance of the Chief of the Indians of this section, to Fort Frances, with such articles as seemed necessary to provide for the then proposed journey of the Minister of Public Works to the interior, and also to supply such parties as might be sent to negotiate a treaty with the Indians of that place and the Lake of the Woods.

The chief having accomplished his journey, returned with satisfactory reports as to the bearing of the Indians in the interior; they sent by him many assurances of good will, and desired him to say that they looked with satisfaction on the present movement, and were ready to extend the hand of friendship to the white man.

The provisions remain in charge of the Hudson's Bay Company's Agent at Fort Frances; and the men are now mostly with Mr. Munro, the gentleman sent out by the Department to effect surveys of the proposed hydraulic works in the region of the lake.

In connection with the works other circumstances arose which as they occasioned outlay, apart from the construction of the road, I desire to mention.

The depot at which the head quarters are at present established, was formerly an Indian camping ground, and has always been a favorable resort with the native population in summer. On our arrival we found at this place two shops in which intoxicating liquors were sold, besides which there were various traders in the neighbourhood who disposed of ardent spirits. This article, so baneful to the Indians, was also sold largely from the steamers whenever they arrived. The demoralizing influences thus produced may be readily conceived. It was difficult at times to find a sober Indian, and I apprehended evil consequences from the presence of so much liquor, easily obtainable, on the workmen on the line, more especially if they should come in contact with inebriated Indians. It, therefore, became a matter of necessity to stop this traffic. In this we succeeded, but it necessitated the embodiment of a police force from among the men on the works, as there was no other force of the kind within a distance of 300 miles. This force consisted at first of six men, but it is now reduced to four.

Should the Government of Ontario, as mentioned in the Departmental letter of the 3rd inst., appoint a stipendiary magistrate with a small police force, and erect a lock-up, the maintenance of order would be ensured, and the works now in progress relieved from the expense which the exceptional circumstances in this regard have imposed.

In regard to the amount of work accomplished, I shall, as soon as operations are brought to a close for the season, prepare maps of the line of route, and submit a report on the same. In the meantime, I may say that we will, by the end of next month, have twenty miles of new road opened. Part of the force is now across the Kaministiquia, at a distance of twenty-four miles from the depot at Thunder Bay. Mere distance, however can convey but an imperfect idea of the work performed. The most difficult section was between the ninth and eighteenth mile post, and it has been passed. In the country now before us, the same force can make two miles with greater facility than they have hitherto accomplished one. On the section just mentioned, from the ninth to the eighteenth mile post, the grounds was very difficult, but the grades can, nevertheless, with but little additional work, be reduced to a maximum of one in twenty.

From the eighteenth mile post westward, there is a complete change in the character of the country as regards soil and rock. The Laurentian hills give place to mountains of high and other intrusive rocks, heaved up through schists and slates of a later geological period. The soil, over a considerable distance, is of a stiff red clay, but there are occasional banks of gravel to be met with which will afford the means of making a first-class road. The road-line winds along mountain slopes and through deep valleys without, however, deviating largely from a straight general course.

The number of men on the works, all told, including surveying parties, teamsters, clerks, and roadmakers is two hundred and six. On the road and bridges, the number of workmen is one hundred and seventy-eight, which is somewhat over the average we have had during summer. The time we have been at work with the full force hardly extends to two months and a half.

The steamers make their last trip at the end of October or beginning of November, and it will then be necessary to discharge the principal part of the workmen, retaining only as many as are necessary to construct the bridges over the Kaministiquia and Matawin River, and get out timber for the wharf at Thunder Bay.

The number so retained will be about sixty. Provisions enough for these have been ordered up. By next steamer I shall submit further details.

I have the honor to be, Sir,

Your most obedient servant,

(Signed.)

F. TRUDEAU, Esq.,

Deputy Minister of Public Works, Ottawa, Ontario.

S. J. DAWSON,



(No. 8,940.)

OTTAWA, 20th December, 1869.

SIR,—I have the honor to inform you that I am in receipt of despatches from the working parties on the eastern section of the Red River Road, up to the 23rd ultimo.

By these I learn that the work of rounding and ditching was continued up to the 18th November, at which date the snow measured only two inches, but the weather had been cold and the frost had penetrated to the depth of nine inches in the ground.

Stone was being collected and lumber prepared for the bridges; and, upon the whole, the various operations connected with the work were proceeding satisfactorily and well.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,)

S. J. DAWSON.

F. BRAUN, Esq.,

Secretary Department of Public Works,  
Ottawa.

(No. 5,981.)

OTTAWA, December 31st, 1869.

SIR,—In accordance with instructions received from the Hon. Sir John A. Macdonald, K.C.B., I have the honor to authorize you to increase the number of men employed on the Red River Road by thirty or forty, so as to put the several portages on that road in a fit state of travel, with as little delay as possible.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,

Secretary.

S. J. DAWSON, Esq.,

Engineer in charge, Lake Superior Section, Red River Road.

(No. 6,030.)

OTTAWA, January 12th, 1870.

SIR,—I am directed by the Honorable the Minister of Public Works to request that you will be pleased to furnish him with a statement, showing the length that would be required, and the probable cost of construction of tramways over the portages between Lake Shebandowan and Lake of the Woods.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,

Secretary.

S. J. DAWSON, Esq.,

Ottawa.

(No. 6,031.)

OTTAWA, January 12th, 1870.

SIR,—I am directed by the Hon. the Minister of Public Works to request that you will be pleased to furnish him with a statement, showing what steps it is necessary should be taken to ensure the completion of the 40 miles of road, now under construction, between Lake Superior and Lake Shebandowan, by the 1st May next, so as to admit of the passage along it of horses and wagons.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,

Secretary.

S. J. DAWSON, Esq.,

Ottawa.

(No. 6,032.)

OTTAWA, January 12th, 1870.

SIR,—I am directed by the Honorable the Minister of Public Works to request that you will be pleased to furnish him with a statement, showing what steps are required to be taken to ensure the completion of the works on the several portages between Lake Superior and Lake of the Woods by the 1st May next, so as to admit of the passage of horses and wagons.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,  
*Secretary.*S. J. DAWSON, Esq.,  
Ottawa.

(No. 6,033.)

OTTAWA, January 12th, 1870.

SIR,—I am directed by the Honorable the Minister of Public Works to acquaint you that it has been reported to the Government that the road, now under construction between Fort William and Lake Shebandowan, is costing \$2,000 per mile. It is further reported that colonization roads, in equally remote localities, are built by the Ontario Government for \$500 per mile. The Minister will be glad to be furnished with an explanatory statement from you on the subject.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN,  
*Secretary.*S. J. DAWSON, Esq.,  
Ottawa.

(No. 9,192.)

OTTAWA, 17th January, 1870.

SIR,—In reference to your letter (No. 6,030) of the 12th instant, requiring statement shewing the length that would be required and probable cost of construction of tramways between Lake Shebandowan and the Lake of the Woods.

I beg to say that, as the portages are being opened under the instructions conveyed in your letter of the 31st ultimo, measurement will be taken on which detailed estimates can be formed as to the probable cost of the work in question.

In the meantime, I may say that the entire length will not exceed six miles, and, if the tramways are to be of wood, material is everywhere so abundant that the cost, including a moderate supply of cars, which can be drawn by horses, will not exceed \$3,500 per mile.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,)

S. J. DAWSON,

F. BRAUN, Esq.,  
Secretary, Department Public Works,  
Ottawa.

(No. 9,193.)

OTTAWA, 17th January, 1870.

SIR,—In reference to your letter (No. 6,030) of the 12th instant, requiring a statement as to the steps necessary to be taken to ensure the completion of the works on the several portages by the 1st May next.

I beg to say that, as directed by your letter of the 31st ultimo, measures have been adopted to ensure these portages being put in a fit state for travel, as explained in my letter of the 12th instant, at the earliest moment the season will permit; and I may add that they will be in readiness, *as well opened portage roads*, by the time the first steamers reach Lake Superior on the opening of the navigation.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,)

S. J. DAWSON.

F. BRAUN, Esq., Secretary,  
Department of Public Works,  
Ottawa.

(No. 9,194.)

OTTAWA, 17th January, 1870.

SIR,—In reference to your letter (No. 6,031) of the 12th instant, directing me to state the steps necessary to be taken to ensure the completion of the forty miles of road now under construction by the 1st of May next, &c.

I beg to state that I would propose sending, an experienced officer to Fort William, with instructions to set all the available force, now on the Government Works in that district, to work on the section of that road remaining to be opened, as soon as the snow shall have so far disappeared as to admit of operations thereon being resumed.

This will ensure the opening of the line by the time stated, in so far that horses with waggons may pass over the greater portion of it (say about twenty-eight miles), and oxen with ox-carts or waggons over the remaining sections.

The line would thus be practicable to the transport of freight by the time the first steamers can reach Lake Superior, on the opening of the navigation.

I have the honor to be, Sir,

Your most obedient servant,

(Signed,)

S. J. DAWSON.

F. BRAUN, Esq., Secretary,  
Department of Public Works,  
Ottawa.

(No. 6,121.)

OTTAWA, January 21st, 1870.

SIR,—I have the honor to acknowledge the receipt of your reply to letters Nos. 6,031 and 6,032, and to inform you that the Minister approves of the steps which you propose adopting to ensure the completion of the forty miles of road now under construction by the 1st May next, and the putting the several portages in a fit state for travel, by the time the first steamers reach Lake Superior on the opening of navigation.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

F. BRAUN, Secretary.

S. J. DAWSON, Esq.,  
Superintendent, Lake Superior Section,  
Red River Road, Ottawa.

(No. 9,540.)

TORONTO, 30th June, 1869.

SIR,—As the report which I had recently the honor of handing in is too voluminous to appear in the appendices to the annual report of your Department, I beg leave to submit a brief summary thereof, in as far as it relates to the explorations of last summer and the work now undertaken.

In the summer of 1868, the explorations which I had for several years conducted in the North-West Territories, were supplemented, under the direction of your Department, by a further examination of the eastern section of the route which I had recommended as the best and most easily rendered available, between Lake Superior and the Red River Settlement.

The result was to shew that the navigable waters of the interior section might be reached by a practicable land road of forty miles from Lake Superior; that at the summit of the watershed a pass existed by which the large lakes on the eastern side thereof might be connected with those on the west, and that these lakes differed so little in level, and received the drainage of areas so extensive, as to place beyond doubt the practicability of forming a canal which should connect the two great river systems of the Winnipeg and St. Lawrence in the high region where they have their common source.

The route which it is proposed to open, and on which work is already commenced, may be briefly described as follows:—

The entire distance from Thunder Bay, Lake Superior, to Fort Garry, is 441 miles. For a distance of forty miles from Thunder Bay, inland, the country is rugged and mountainous, and increases so rapidly in elevation that Shebandowan Lake, which is then attained, is upwards of eight hundred feet above the level of Lake Superior. Descending from such an altitude, in so short a distance, the streams, as may be supposed, have an exceedingly rapid course, so that however ample the supply of water may be—and in the Matawin and Kaministiquia it is sufficient—the difference of level is so great as to preclude the idea of a canal for the present.

Proceeding to the westward the country is still very rocky and broken, but remarkable, from the fact, that a very considerable portion of its area is occupied by lakes. These lakes occur in such close succession, and are otherwise so advantageously situated in relation to each other, as to afford the means of forming continuous "slack water navigation" from the eastern end of Shebandowan Lake to Fort Frances, a distance of 191 miles.

This region of lakes ends at Fort Frances, and from thence, westward, to the north-west angle of the Lake of the Woods, the navigation is uninterrupted save by two little rapids on Rainy River, which may be easily improved.

To render the navigation continuous from the terminus of the Thunder Bay Road to the north-west angle of the Lake of the Woods, a distance of 311 miles, the entire lockage required would be about 430 feet, or 1.35 feet to the mile, being less than that of the Rideau, which has 457 feet of lockage in a distance of 126 miles, equal to 3.63 feet per mile.

While referring to this section, I may remark that no part of the North-West Territories is more inviting to settlement than the country bordering on Rainy River. The soil cannot be surpassed, and the climate is equal to that of Ontario.

From the north-west angle to the prairies bordering on Red River, the distance is about sixty miles, through a region which, although swampy, affords a practicable route for a road, and a further section of thirty miles across a level prairie completes the distance to Fort Garry.

The proposed scheme of opening the communication has, for its ultimate object, a railroad from Lake Superior to the navigable waters of the Lake Region; navigation rendered continuous, by means of lock and dam, from the terminus thereof to the north-west angle of the Lake of the Woods, and a railroad from the latter point to Fort Garry.

There would thus be a railroad of about forty miles in length at Lake Superior, succeeding which would be 311 miles of navigation, connected at its western extremity by a railroad of ninety miles with the Red River Settlement.

These are works which, to carry them out completely, would occupy several years, both on account of their magnitude and the minute surveys which would be necessary before the railroad or hydraulic works could be undertaken.

In the meantime the preliminary line of communication, and which alone is as yet approved by your Department, will comprise a waggon road of forty miles from Thunder Bay to Shebandowan Lake, such improvement as can be rapidly carried out in the region of the lakes, and a waggon road of ninety miles from the north-west angle of the Lake of the Woods to Fort Garry.

At this date men and material are being forwarded, as rapidly as possible, to Lake Superior, and operations are now being commenced at Thunder Bay.

I may also mention that in the western section of the route, considerable progress has been made under other direction than mine. Last fall your Department, having in view the state of distress in the Red River Settlement, arising from the failure of the crops, and the relief therefrom which the means of employment might afford, ordered operations to be commenced on the line leading from Fort Garry to the Lake of the Woods. The progress made in that section has been reported on by Mr. Snow.

I have the honor to be, Sir,

Your most obedient servant,

(Signed) S. J. DAWSON.

F. BRAUN, Esq.,

Secretary, Department of Public Works,  
Ottawa.

### REPORT ON THUNDER BAY ROAD, BY S. J. DAWSON.

OTTAWA, 26th March, 1870.

SIR,—I have the honor to acknowledge the receipt of your letter of the 11th instant requiring me to furnish the information called for by the House of Commons in regard to the progress of the works in the eastern section of the route between Lake Superior and the Red River Settlement.

In explanation of the delay which has occurred; I beg to say that unavoidable absence on matters connected with these works, has up to this time prevented me from endeavouring to supply the information demanded.

I have now the honor to submit a brief report, in which will be found such information as the returns in hand enable me to furnish.

The appropriation for opening the North-West Territories became available only on the first of July last, but a short time previous to that date I was directed by the Department to make such preliminary arrangements as seemed necessary to ensure the vigorous prosecution of the work on Thunder Bay Road.

Accordingly men having been engaged and material provided, I left Collingwood on the 6th of July and arrived at Thunder Bay on Friday, the 9th of the same month.

The force engaged up to that time numbered in all 206 men, including the surveying parties, of whom mention will be made further on.

With all possible expedition the men were formed into gangs of suitable numbers, and set to work under experienced foremen on the road. In course of a short time the organization was completed, and the work proceeded as fast and as satisfactorily as under any system which could have been adopted.

#### *Character of Country on the Line of Road.*

In previous reports, some of which have been already submitted to the House of Commons and published, I have described the country through which the Thunder Bay Road passes.

Leaving Lake Superior at a point on Thunder Bay, called the depot, about three miles and a half to the east of Fort William, the road line strikes in a tolerably direct course, as exhibited on the accompanying map, to the Kaministiquia, which it crosses at a distance of 20 miles and 70 chains from the starting place, at a point a little below the mouth of its chief tributary, the Matawin.

It then passes through a deep gorge in the mountains which hem in the valley of the Kaministiquia, and comes out on the Matawin, four miles from its mouth. Striking directly across this large river it continues westward to Shebandowan Lake, through a fine rolling country, without any material deviation from its general direction.

The total distance from Thunder Bay to Shebandowan Lake is forty-three miles. It was believed that three miles of this distance might be avoided by making a rough dam at the outlet of the lake, but this is a matter requiring farther investigation, as will be explained further on.

From the starting point at Thunder Bay to the eighteenth mile post is gravelly loam, rock, or swamp. In the first eight miles of this section no serious obstacles were met with, but in the succeeding ten miles, that is from the eighth to the eighteenth mile posts, a country is passed through, than which it would not be easy to conceive a more difficult. Low rocky hills, alternating with deep swamps, the former covered in some cases with a heavy growth of birch trees, with roots tangled and matted among stones, and the latter requiring to be fascined or bridged, were the prevailing characteristics. In this section—the roughest in the whole route between Lake Superior and the Red River Settlement—it was, in fact, quarrying, fascineing, or bridging throughout. The result, however, has been a road which, when some of the grades are improved, will be but little inferior to what it would be if systematically macadamised. When stones, roots, and vegetable mould were removed, there remained, in the dry sections, a stiff gravelly loam, which formed an excellent roadway, and the swampy sections were, in the first place, fascined and then covered over to an adequate depth with the same gravelly material.

A little westward of the eighteenth mile post, the character of the country completely changes. The rocky ridges, with intervening swamps, give place to hills of red clay, and in descending to and ascending from the valley of the Kaministiquia, between the eighteenth and twenty-second mile post, there was a good deal of side-hill cutting.

The accompanying plan, in profile, will give some idea of the nature of the country through which the line passes in this section.

In descending to the Kaministiquia from the east, the road runs for three-quarters of a mile along the crest of a singular ridge or tongue of land, which extends from the mountains to the valley, presenting an almost uniform slope of one in twenty.

The discovery of this most extraordinary natural embankment was fortunate, inasmuch as it afforded a practicable grade by which to overcome, with but little labor, a descent of 200 feet. The ridge is formed of stiff red clay, and it is in some places so narrow on its crest as to be just wide enough for the road, with but little room to spare.

Its sides slope at an angle of about  $45^{\circ}$  down to deep glens on either side, with densely wooded hills rising high beyond them, and as seen from this point, the country though highly interesting, does not look inviting as regards the formation of roads.

From the 22nd mile post to the bridge site on the Matawin, the road still winds among mountains, and the amount of labor expended in its formation has been great. The 25th mile post is west of the Matawin, beyond the bridge site just referred to, and from thence to Shebandowan Lake. As already explained, the country in its general character becomes more favorable, and through this section a line has been opened for twelve miles in such a way that oxen with sleds or carts can pass over it.

To return to Thunder Bay, and regarding the different sections as they occur, there is first:—

#### *The Colonization Road.*

A section of five miles and a half of the line adopted was opened by the Colonization Road Agency of Ontario in 1857. This section was hastily made at first, and comparatively but little labor bestowed on it. Indeed, the main object in its construction seems to have been the avoidance of labor and its attendant cost, rather than the formation of a road which should be the best which the ground would admit of. Thus, at a short distance from the starting point at Lake Superior, the line is run straight up the face of a sand hill, presenting in one part a grade of one in seven, and attaining an altitude of 203 feet above the lake, only to descend somewhat less rapidly on the opposite side. At this point a new line has been laid out and partly cleared. Further on, at the fourth mile, the line is run along a ridge of bare rock to avoid a little additional cutting and grubbing, which would have been involved in carrying it over much better ground close by. Where the road is best made it is too narrow, only 14 to 16 feet between the ditches.

With the exception of laying out and partly clearing a line past the sand hill, as already stated, and rebuilding a bridge which has been burned, nothing has been done to the section made by the Colonization Road Agency.

In its present state waggon can pass over it, but to make it conform to the line as now being opened additional outlay will be necessary, but it is not intended to do anything further than to keep it in repair until Shebandowan Lake shall have been reached.

It is the first, indeed, the only portion of the line which casual visitors see, and they naturally infer that it is a fair specimen of the whole, and thus unfavorable reports as to the general character of the road have come to be widely circulated.

*The Hilly Section,*

May be said to commence a little beyond the eighth mile and end at the twenty-fifth, but by far the most difficult and roughest part was between the eighth and eighteenth miles as already explained. In this part the grades can be made easy, and with but little excavation in a few places, might be reduced at the highest points to a maximum of one in eighteen or twenty.

All other considerations were made secondary to that of obtaining easy grades, and in this regard the line will shew how much may be done by taking advantage of the ground, and winding along the hill sides without seriously increasing the distance.

As soon as the line was completed in this section, although the ground was but newly turned up, and the weather wet, a span of horses with a waggon could easily take 17 cwt. over it.

Between the 18th and the 25th miles there are no less than four rivers to cross—first, the Strawberry River, with a channel over a hundred feet in width; next the Kaministiquia, a deep and rapid stream, 320 feet wide at the crossing; then the Matawin, a large river 200 feet in width; succeeding which, at the 25th mile, is the Sunshine Brook, a stream of about the same size as the Strawberry River.

*The manner of proceeding with the work.*

In regard to this subject, I beg to transcribe a portion of my Report of the 24th September last, addressed to the Deputy Minister of Public Works:—

“FORT WILLIAM, LAKE SUPERIOR,  
24th September, 1869.

“In regard to the works, we have been making fair progress notwithstanding that the weather has been very unpropitious. The rains which prevailed in this section from the middle of August to the middle of the present month, had the effect of flooding the streams and swamps to an extent which the Indians declare to have been absolutely without precedent in any previous summer within their recollection. Last week, the water of the Kaministiquia and Matawin, notwithstanding that these rivers flow from large lake basins, was fully up to the height of a Spring flood. The ground in hill and valley became saturated, and the swamps were in some cases converted into lakes. Lake Superior itself, which, in ordinary seasons, is not sensibly affected by summer rains, rose two feet and is still rising. While the rains continued, the workmen, having only the shelter of thin tents, were much exposed. They, however, worked on without a murmur, and an occasional call for an additional blanket or an oil cloth was all that occurred to indicate the existence of the slightest discomfort.

“This shews the advantage of taking to a wild region, such as that in which we now are, a class of men who have been accustomed to the wilderness and the exposure of the *voyageur's* life.

“During the present week the weather has much improved, the ground is fast drying and the progress has been correspondingly rapid.

“A brief statement of the manner of proceeding with the work will, no doubt, be of interest to the Department. It differs but little from the ordinary course pursued in opening roads in a new region, except in so far that all the different operations are being simultaneously carried on.

“In advance of the workmen is a party of surveyors, accompanied by such of the native Indians as are best acquainted with the locality. These explore the country along the line of route and are careful to select the best ground. They have followed, as a base, the line projected last summer, and in rocky and swampy sections have improved upon it by making slight deviations. The surveyors are now near Shebandowan Lake, and in a short time will have completed their work. Following on the line laid out by them is an assistant engineer with a party of men who cut a track as they proceed, over which oxen can pass with a sled. This ox road has been of great advantage in affording the means of supplying the different gangs of workmen with provisions and material.

"The working parties, are placed in gangs at convenient intervals apart, over a distance of three miles or thereabouts. Each gang is divided into two parties, numbering from fifteen to twenty-five men. One of these parties grubbs and clear the line, the other follows, ditching and rounding up the roadway.

"Bringing up the rear is a small party with all the carts at our disposal, grading sections, where the carriage of earth or gravel would be too far for the wheelbarrow.

"Besides the road makers, a party of twenty men is stationed at the bridge site on the Kaministiquia River. They have prepared a considerable quantity of timber for the structure which is to cross that river, and have just completed a bridge over Strawberry River, a stream about a mile and a half east of the station at which they are encamped.

"At the depot, at Thunder Bay, a commodious store-house, 30 by 28 feet, with an upper and a lower floor has been completed. A stable 50 by 18 feet, capable of accommodating the horses and oxen, at present on the line, is nearly finished; and in close proximity, a hay house, already filled with an ample store of the material it was designed to hold, has been erected.

"A small log building, put up two years ago by the colonization road party, who were then here, has been completed roughly and is now used as an office. These with a small blacksmith's shop and two board sheds, constitute the buildings at the depot. There is, as yet, no dwelling house, nor is it intended to erect one for the present, such of the party who are here, being accommodated in tents.

"Besides the men employed on the works a number of Iroquois Indians were engaged with a view to their employment on the surveys in the interior and keeping up communication with the Red River Settlement.

"Soon after our arrival, a party selected from among them was sent, under the guidance of the chief of the Indians in this section, to Fort Frances, with such articles as seemed necessary to provide for the then proposed journey of the Minister of Public Works to the interior; and also, to supply with provisions such parties as might be sent to negotiate a treaty with the Indians of that place and the Lake of the Woods.

"The chief, having accomplished his journey, returned with satisfactory reports as to the bearing of the Indians in the interior; they sent by him many assurances of goodwill, and desired him to say that they looked with satisfaction on the present movement, and were ready to extend the hand of friendship to the white man.

"The provisions remain in charge of the Hudson's Bay Company's agent at Fort Frances, and the men are now mostly with Mr. Monro, the gentleman sent out by the Department to effect surveys in the region of the lakes.

"In connection with the works other circumstances arose, which, as they occasioned outlay apart from the construction of the road, I desire to mention:—

"The depot at which the head quarters are at present established, was formerly an Indian camping ground, and has always been a favorite resort with the native population in summer. On our arrival, we found at this place two shops in which intoxicating liquors were sold, besides which there were occasional traders who disposed of ardent spirits. This article, so baneful to the Indians, was also sold largely from the steamers whenever they arrived. The demoralizing influences thus produced may be readily imagined. It was difficult at times to find a sober Indian, and I apprehended evil consequences, from the presence of so much liquor, easily obtainable, on the workmen on the line, more especially if they should come in contact with inebriated Indians.

"It, therefore, became a matter of necessity to stop this traffic. In this we partially succeeded, but it necessitated the embodiment of a police force from among the men on the works, as there was no other force of the kind within a distance of 300 miles to which we could apply. This force at first consisted of six men but it is now reduced to four.

"Should the Government of Ontario, as mentioned in the Departmental letter of the 3rd instant, appoint a stipendiary magistrate with a small police force, and erect a lock-up, the maintenance of order would be ensured and the works now in progress relieved from the expense which the exceptional circumstances in this regard have imposed."



## BRIDGES OVER RIVERS.

Of these there will be four of moderate dimensions, and two large ones.

1st. A little beyond the sixth mile post, reckoning from Thunder Bay, the road line traverses a large brook called the McIntyre River. This stream is crossed by a bridge 100 feet in length, supported on two abutments of crib work, one at either side of the channel. Timber and stone being close at hand, no great outlay was involved in its construction.

2nd. The next considerable bridge is over the Strawberry River, near the 19th mile post. Although but 120 feet in length, it is a more expensive structure than the last, on account of the approaches and the height to which it had to be raised over the stream, which is subject to sudden floods. It is in the clay country, and comes down red and turbid after rain, and in Spring it spreads high over its banks. The timber used in the construction of the bridge amounted to 4,000 cubic feet, and the stone for the abutments had to be drawn some distance.

*The Kaministiquia Bridge.*

3rd. This bridge is 20 miles and 70 chains from the Depot at Thunder Bay. It was completed, all but the hand rail, on the 10th March.

The channel of the river at the crossing is 320 feet in width, and eleven feet deep in the middle. The bridge has abutments at either end, and between these is supported by seven piers of cribwork, all of which are solidly filled with stone. The piers are formed so as to resist the action of the ice, and sheeted with plank on the ends facing the stream. The superstructure is 10 feet over high water.

The quantity of timber used in the entire structure was over 32,000 cubic feet, and all this had to be taken from a distance, as the surrounding country afforded none, having been swept of its forests by fire. The estimated cost of this bridge was about \$4,500—which will be about its actual cost. I am, however, as yet, without full returns.

*The Matawin Bridge.*

4th. About four miles and a quarter west of the Kaministiquia a bridge is now being built over the Matawin. At last accounts the timber had all been prepared, and the piers will be built and the superstructure well on, if not completed, by the time the spring opens.

At the close of navigation last fall, it was intended only to prepare the material during the present winter, as at that time the height of water and the rapidity of the current prevented proper soundings from being taken for the piers and abutments.

After the ice took, however, the water fell rapidly, and the officer in charge having reported favorably as to the soundings and the nature of the bottom, was directed to go on with the work of construction.

The timber being quite convenient, the building of the bridge, although it will be a formidable structure, as to dimensions, will involve but a moderate expenditure as compared with that over the Kaministiquia.

5th. The Sunshine Brook, near the 25th mile post, is a stream of the same class as the Strawberry and McIntyre rivers. Timber is being prepared for the construction of the bridge which is to cross it, and it will be put up immediately after navigation opens.

6th. The Kagaska river—within seven miles of Shebandowan lake—is the next and last stream of consequence on the Thunder Bay road. It requires a bridge of about 100 feet in length, which will be put up early in Spring.

*Other Works.*

The entire length of road practicable to horses and waggons is 25 miles, reckoning from Thunder Bay. Beyond this, a distance of 10 miles of road is partially opened and now practicable to oxen with carts or sleds, making in all 35 miles from Thunder Bay, or reaching within five miles of the dam site below Shebandowan Lake. The latter section, however, requires a great deal of additional work. Beside the bridges already enumerated, the work on the road, embracing embankment, excavation and the bridging of small brooks and swamps, in regard to which the quantities in detail are asked for, was in progress when I left Thunder Bay on the 1st November last, and was continued subsequently to that

date, until the advance of winter caused operations of such description to be suspended for the season. Since then; communication with those distant works has been, and is at present, tedious and difficult, so that precise statements of quantities, as called for, cannot at once be obtained. They will, however, be furnished at as early a date as is possible, after the opening of the navigation.

#### *Buildings at Thunder Bay Depot*

These consist of the following:—

1. A wooden frame store house, 50 by 28 feet and walls 12 feet high. It has two floors, is well shingled and substantially finished throughout.
2. A stable 50 by 18 feet, well shingled and finished, with a shed for carts attached, and a board hay-house near it.
3. A log building, 20 by 30 feet, used partly as a store house and partly as an office.
4. A small board store house, in which are kept canoe outfit, tools, &c.
5. A small board house, used for cooking and baking.

These, with a workshop for the blacksmith, constitute the public buildings at the depot.

At these buildings an area of about six acres of ground has been cleared up completely, as a precaution against fire, which sometimes sweeps through the adjoining woods.

The aggregate value of these buildings and improvements is about \$3,500, and only a certain proportion of this sum is chargeable to the road, as the depot at the landing place is equally necessary to all parts of the line.

#### *The Wharf at Thunder Bay.*

In my report of last year, it was proposed to sink an isolated pier in front of the depot, at which vessels could be discharged, leaving the construction of more extensive works of the same description to private enterprise. Timber is now being prepared for this pier, and its dimensions would be sufficient for the convenience of the works. In view, however, of an extended traffic, and the general accommodation of vessels, it might be better at once to run a wharf from the shore to deep water.

Its length would be about 600 feet, and the work of its construction might be done by contract, as soon as plans and specifications can be prepared.

#### *Expenditure, apart from Work on the Road.*

As stated in my report from Thunder Bay, *voyageurs* were engaged, canoes purchased, and material provided for the then proposed journey of the Minister of Public Works to the Red River Settlement, and such supplies were sent to Fort Frances, as seemed necessary in that regard, as well as to provide for the maintenance of such party as might negotiate a treaty with the chiefs of the powerful tribe of the Saulteux Indians, who were then in waiting at that place.

Supplies and men were also furnished to the engineers who were sent to effect surveys in the interior, and, as already stated, the organization and maintenance of a police force fell on the works. Of this expenditure, statements in detail will be submitted, as soon as the accountant can prepare them.

#### *The System of Work.*

When the opening of a route between Lake Superior and the Red River Settlement was determined upon last year, there were manifestly but two ways in which the work could be carried on, namely: by contract, or by engaging workmen and competent overseers and going on with operations at once.

If the first had been adopted, that is the contract system, whatever may be its advantages, or the reverse, it would have occasioned delay, inasmuch, as in the first instance, it would have been necessary to effect careful surveys and measurements on which estimates of quantities could have been made and plans and specifications drawn up, as a preliminary step to advertising for tenders and entering into contracts. At a moderate estimate, a full season would have been occupied in this way.

If any immediate advance was to be made in opening the line there remained then but

the second plan; that of engaging men and setting them to work at once, and this having been adopted, it became necessary to place Surveyors in advance, so that the best ground possible might be selected for the road.

Thorough investigation in this respect was the more necessary from the fact, perhaps not universally known, that the country on the line of route is of a broken and hilly character, utterly untracked and untenanted, save by a few wandering Indians, and that the cursory surveys previously made had merely determined the general course of the route.

#### *The Surveys.*

Two surveying parties were therefore placed on the line in advance of the workmen; one under the charge of Mr. George F. Austin, Provincial Land Surveyor, and the other under Mr. Archibald McNab, also, a Provincial Land Surveyor.

Mr. Austin had with him two assistants, as chainbearers, and generally two or three men, as they could be spared from other work. His duty was, to take levels and measurements on the line.

Mr. McNab's party consisted of two chainbearers, with Indians and others, generally to the number of eight or nine in all. He had it in charge to examine the country in advance, along the line of route, and select the best ground, and this he did in a very satisfactory and effectual manner. The surveys occupied somewhat upwards of three months, and in that time were completed to Sherbandowan Lake, so that no further operations of a similar character are required on the Thunder Bay Road.

Both Mr. Austin and Mr. McNab rendered valuable assistance. Extracts from their report will be found annexed.

#### *Road Construction, Number of Men, Foremen, Superintendents, Clerks, &c.*

There were on the road an assistant engineer at \$2 per day, four foremen, two of whom had \$1.50 per day, one \$2 per day, and one \$2.75 per day. Under these foremen were from 150 to 170 men, engaged in the various operations of clearing, grubbing, ditching, &c. Gang-masters, who were themselves workmen, were appointed by these foremen as occasion required. The pay of the common workmen ranged from \$15 to \$20 per month, that of gang-masters from \$20 per month to \$1 per day.

The carpenters engaged in bridge construction, and on the buildings at the depot, had 5s. per day. Time-keepers, of whom there were three, had one of them 5s. per day, and two \$1.33 per day: their duty, besides keeping time and accounts, was to see the different gangs supplied with provisions and outfit.

There were eight horses and four yoke of oxen on the line in charge of eight teamsters, whose pay was the same as that of the other workmen.

The skilled Iroquois *voyageurs*, of whom there were twelve, engaged for the purpose of proceeding with the then Minister of Public Works to the Red River Settlement, had from 4s. 3d. to 5s. per day. They were employed for a time in conveying provisions by canoe to the interior stations, and were afterwards sent with the surveying parties.

Attached to the works, was an accountant and paymaster, at a salary of \$1,000 per annum. He had his headquarters at the depot at Thunder Bay, at which point was also stationed a storekeeper at \$1.50 per day, whose duty it was to receive and give out the supplies and aid the accountant with the books.

There was always a blacksmith on the work—one for a short period, at \$2 per day, who was paid off, and replaced by one at \$1 per day.

The total force employed numbered, on the 10th July, 206 men, but it varied as individuals left from different causes, and were replaced by others.

#### *The Purchase and Forwarding of Supplies.*

Having so many men in a wilderness, at a distance of six hundred miles from the nearest source of supply, it became an absolute necessity not only to have ample stores of food always on hand, but also to provide articles of clothing for the men, and these were given to them at cost price, much to the dissatisfaction of some petty traders who hoped to make money by their necessity.

In order that provisions and outfit might be purchased at the lowest rates, and regularly forwarded, it was considered expedient to station an agent for a time at Toronto. The first agent employed in this way had \$100 per month; but he left, and was replaced by another at \$2.75 per day.

In concluding this subject, I may be permitted to remark, that the rate of pay to the workmen was not greater than that current throughout the country for labor of a similar class, and that the number of foremen and officers, all of whom had but moderate pay, was not out of proportion to the force.

#### *The Transport of Men.*

From different parts of the country to Collingwood was always arranged so that they met the steamers at the latter place, and there never occurred any delay or waiting over. The various railway agents and steamboat captains were accommodating, and made a reduction in their usual fares.

Mr. Shackell, the obliging agent of the Grand Trunk Railroad at Montreal, struck 25 per cent. from his regular tariff for men going to and returning from the works.

Mr. Cumberland, the able director of the Northern Road, was no less obliging, and reduced his fares in the same ratio.

Indeed, all parties with whom we came in contact evince a like disposition to encourage and advance the enterprise.

#### *The Maintenance of Order.*

This will be easy now that the "Public Works Act" has been made applicable to Thunder Bay, and that, as I learn from the best authority, a police force is to be established, with the support of which the works will not, as hitherto, be burdened.

Last summer, whenever the steamers made their appearance, the Dépôt became the rendezvous of Indians, half-breeds, miners, and a number of young men who loitered about the Bay. Liquor flowed freely from the steamers, and under such circumstances it was not always easy to enforce order with the means at our disposal. Anything in the way of rowdiness which occurred was, as a matter of course, credited to the works, however few of the workmen might be present.

The Public Works Act, if properly enforced, will effectually stop the introduction of intoxicating liquor, which is so productive of mischief among an Indian population; and this once effected, the maintenance of order will be an easy matter.

#### *The Cost of the Road.*

According to the estimate submitted by me before the work was commenced, the road, apart from the bridging of the Kaninistaquia, should cost \$1,800 per mile, and this will be about its average rate when completed according to the specifications accompanying the estimate.

The total amount drawn from the Department, on all accounts whatever, from the commencing of the work up to the 31st December last, was \$60,056 38.

On the latter date, there remained at Thunder Bay and along the road, stock, plant and provisions to the amount of \$12,500, apart from the value of the buildings. The cost of surveys, police force, &c., is included in the above sum.

The accountant is now making up the sums chargeable to different heads under which expenditure was incurred, as referred to in the foregoing, and these will be handed in as speedily as possible.

In judging of the amount of work performed, and the arrangement and management of the force, it must be borne in mind that the men were suddenly engaged in midsummer, and that the remainder of the season, up to the close of navigation, afforded but little over three months in which to carry on operations.

I have the honor to be, Sir,

Your most obedient servant,

S. J. DAWSON.

F. BRAUN, Esq., Secretary,  
Department of Public Works,  
Ottawa.

## MR. AUSTIN AND MR. McNAB'S REPORTS.

These afford further evidence that the climate about Lake Superior is not so uninviting as it has often been represented to be. As an example of this, I may mention that vegetables, the most susceptible to frost, notwithstanding that the season was unusually wet and cold, were untouched at Thunder Bay on the 17th September, while on the first of the same month the potato stems were blackened at Collingwood. And not at Thunder Bay only, but some distance inland, at a little farm 300 feet above the level of Lake Superior, the most tender vegetables were at the same date (17th September) as green as in midsummer. The elevated lakes of the interior do not as a rule close early, and it is known for a fact that Dog Lake, which is upwards of 700 feet above Lake Superior and twenty miles inland, seldom freezes over, so that it can be crossed on foot before Christmas.

*Report of Archibald McNab, Esq., on the Valley of the Matawin.*

TORONTO, November 13th, 1869.

SIR,—In accordance with the instructions I received from you at Thunder Bay, on the 12th July last, to survey and locate a portion of the Red River Road, extending from the eastern side of the Valley of the Kaministiquia to Shebandowan Lake, a distance of about twenty-five miles in a westerly direction.

After organizing my party with canoe and outfit, I ascended the Kaministiquia River to the point selected for the "bridge site" near its confluence with the Matawin River, a distance not much short of sixty miles, although by the new road line only about twenty miles from Thunder Bay.

On my arrival at the "bridge site," I immediately proceeded to connect my survey with Mr. Brown's line, at a point about four and a half miles east, near the height of land between Thunder Bay and the river Kaministiquia, and at an elevation of about 449 feet above the latter.

This section of the road occupied considerable time in exploring and selecting the best line, as the engineering difficulties were very great and the weather at the same time very wet and disagreeable.

As soon as I had located this section of the road, I lost no time in crossing the Kaministiquia and commenced the survey of the section of the road leading to Lake Shebandowan, a distance of about twenty-three miles in a straight line, through a good rolling country, mostly covered with evergreen thickets, tall pines, &c.

In exploring this section, I passed through extensive areas of excellent land, composed of clay loam soil and well adapted for agricultural purposes, and abounding in good material for road building, such as timber and excellent gravel, with clay sub-soil, &c.

After exploring some distance north, south and west of the Bridge site it was found advisable to keep the south side of the Matawin River, which joins the Kaministiquia River about forty chains above the bridge site, and follow its valley about four miles in a westerly direction where the road line crosses the Matawin River to the north side, thence still westerly along the margin of the river to a point distant from the Kaministiquia River, about six and a half miles, where the valley of the Matawin turns abruptly to the south. Thence the road line continues in the same direction as above, nearly in a direct line to the proposed "dam site" on the Shebandowan River, three miles east of Shebandowan Lake, and about twenty miles west of the Kaministiquia River.

This last section of the survey was much easier performed than an equal distance of the eastern sections, on account of the good tract of country, which seemed to rapidly improve in quality of soil and timber, &c., and the materials for road making seemed to be in greater abundance than before met with, as I approached the table land in the neighborhood of Shebandowan Lake; also the information I received from the able explorer "Penassi," the Indian whom you kindly sent to my assistance, was of importance to me in getting on with the work as the season of the year best adapted for the work was fast drawing to a close, and as it

was of great importance to have my survey joined with Mr. Monro's work, thus connecting Thunder Bay by actual survey with Lake Shebandowan and other points of interest further west.

In performing the survey of this last section I found it necessary to make a traverse survey of the Matawin River, in order to obtain a correct knowledge of its locality and the general character of the extensive valley through which it flows.

Having made the connection with Mr. Monro's survey, and being amply satisfied with the practicability of the line I had chosen, which I found to be well adapted for an excellent road, both in grade and straightness, I commenced my retreat for Thunder Bay.

On my return from Shebandowan Lake I found no difficulty in calling to mind the pleasing aspect and inviting appearance of the extensive valleys and rolling lands of which I had obtained a knowledge by ascending lofty trees on high points of land during my explorations for a road site, and taking lateral observations at short distances. I was agreeably surprised to find a tract of country so different from what I had been led to believe existed on the north shore of Lake Superior.

In the immediate vicinity of the Kaministiquia and Matawin Rivers the land is rough and broken in places to a considerable extent, but at a short distance inland, as is generally the case, the quality of the land improves very much, being more even on its surface and of a deeper and more regular soil, and even upon the highest lands may be found a great depth of good rich soil. Although the large flats along the rivers are of the richest and most fertile soil I have found, still, from the appearance of the exposed points of rocks along the rivers, in passing by *canoe route*, it might be supposed that the country all around was also rocky and of little value, instead of being as I have stated before.

East of the Kaministiquia and up the great valley of the Matawin River to Shebandowan Lake, the soil is composed of a rich clay loam, as I have already mentioned, with some fine plots of sandy loam soil very strong and deep.

The land is mostly timbered with pine, poplar, birch, spruce, and balsam, and although there are many outcroppings of rock and high precipitous mountains, particularly in the neighborhood of the rivers; still, from such information as I have been able to gather by careful observations along the line of road, I should judge that eighty per cent. of the land is capable of being cultivated and fit for farming purposes, and can be tilled with moderate labor.

I may mention here, from what came under my notice on landing at the main station at Thunder Bay, on the 9th July last, I was led to believe that vegetation must spring very early in the season on cultivated lands, as I found red clover and timothy, between two and three feet high along the line of road, where the seed had been accidentally dropped; and further west, along the line of road, in the vicinity of the Kaministiquia River, where there are extensive areas of burnt lands, the strawberry, red raspberry, and blueberry vegetate in great abundance. I also found some fine samples of red plums, although fruit trees of this kind are nearly extinct in this country, on account of great fires having swept over the whole region, destroying everything, except in low places, and near the rivers, where elm, ash, and other kinds of hardwood may be found.

For further particulars and a more minute description of the country above referred to, I have to refer you to the Field Notes of Survey, which are most respectfully submitted.

I have the honor to be, Sir,

Your very obedient servant,

ARCHIBALD McNAB, P.L.S.

S. J. DAWSON, Esq.,  
Engineer, Red River Road.

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*Extract from Report of George Austin, Esq., P.L.S.*

OTTAWA, 8th March, 1870.

SIR,—The north shore of Lake Superior, with but few exceptions (Thunder Bay being one of them) is rough, mountainous, barren, and uninviting in appearance, many parts nothing

but mountains of bare rock, for miles in extent along the coast are to be seen; but as you penetrate a few miles into the interior, the country undergoes a great change, the high bare hills are replaced by what may be termed a "heavy rolling country," with a good depth of soil, the valleys being exceedingly fertile.

Thunder Bay and vicinity possess all the different soils (gravelly, sandy, and heavy clay); of the latter there are two varieties, the grey and red. The red clay of this section resembles the red indurated clay, found on the heights near the Nipigon River, which is much used by the Indians for carving into pipes. It is difficult to say how these large deposits of red clay have originated; but it is generally supposed that they have been formed by the disintegration of the feldspathic rocks. I am inclined to favor the opinion that it would make excellent material for the manufacture of pottery: one remarkable peculiarity about this clay is, that it contains no grit whatever, in feel and color it resembles both marl and saponite. It, perhaps, would be well to have these clays subjected to a chemical analysis, in order to ascertain whether they could be made serviceable.

Not having had an opportunity of seeing any growing crops in this section, but owing to my knowledge of soils, and judging from the timothy and clover that had sprung up along the line of road, I feel satisfied that the soil is rich enough to produce wheat, oats, barley, peas, and hay, together with all the varieties of root crops.

The timber in this region is of large growth, considering the high northern latitude ( $48^{\circ} 30'$ ) and consists of pitch pine, white and red spruce, balsam, white birch, poplar, cedar, and a few white pine and elm. A very extensive fire, which took place about nine years ago, has destroyed the timber for miles in the high land, and left nothing but a few pitch pines standing, all of which are killed; sections of this burnt district resemble vast undulating plains, on which have sprung up a heavy growth of wild vetches, strawberries, raspberries, intermixed with a large proportion of wild roses; those plains, when viewed from an eminence, when the roses are in full bloom, are very beautiful.

Not having a thermometer with me, and last season being remarkably cold and wet, I am not prepared to say much as to the climate; the first frost of which I took a note, occurred on the eighteenth of September, and the general summer weather on the shore of Lake Superior is very temperate, owing, no doubt, to the influence of such a body of clear cold water. It has been for some years acknowledged to be the most healthy, and during the summer months, the pleasantest part of the Dominion. The average temperature of the water of the lake at twenty fathoms, in winter, is thirty-five degrees Fahrenheit, and in summer, taken in the months of July and August, thirty-eight and a half. I am of opinion that the climate, on the border of the lake, would not suit the growth of wheat or Indian corn. This lake affords abundance of trout and white fish of the finest quality.

In a mineral point of view, the north shore of Lake Superior, as Sir William Logan remarks, is "destined to rise in importance;" the rock of the country is chiefly a compact slate, much like the slates found on the Missassagua River (Lake Huron); these slates are traversed by veins of Amethystine quartz, hold a little galena, copper pyrites and frequently silver; along the Matawin river the slate becomes less compact and softer, resembling somewhat the slates in which gold is frequently found (Talcose). In several places near the Kamistiquia River, magnetic and hematite iron ores are abundant; these ores are mixed up with ribboned jasper and jasper conglomerate, and runs in bands or dykes through the slates; these jaspers in their turn are overlaid by trappean rocks.

In conclusion, I beg to make mention of my two assistants, Mr. Charles Pentland and Mr. David Gilmour, two young gentlemen from Quebec, who rendered me valuable services during the season.

I am, Sir,

Your most obedient servant,

GEORGE F. AUSTIN,

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